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ABSTRACT

This yearbook contains the papers presented at the third annual meeting of the Southwest Reading Conference for Colleges and Universities as well as additional articles of interest written by members. Topics considered: reading in the college curriculum, evaluation of the tachistoscope in reading improvement programs, recent research relative to college reading, emotional problems in reading, reading tests, informal methods of appraisal, checking college students' vision, college and adult reading programs, reading improvement in industry, factors in the reading background of college students, counseling and reading programs, word attack and vocabulary development, and grouping in remedial reading. A list of the representatives in attendance at the annual meeting is also included. (LL)

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WHAT THE COLLEGES ARE DOING
in
READING IMPROVEMENT PROGRAMS

U.S. DEPARTMENT OF HEALTH,
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Third Yearbook
of
The Southwest Reading Conference
for
Colleges and Universities

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PREFACE

Most of the work of the Southwest Reading Conference consists of the activities of the annual meeting and the publication of the Yearbook.

All of the papers presented at the annual meeting are contained in the Yearbook. Additional articles of interest written by members are also included.

One of the purposes of the organization is realized in the presentation and evaluation of topics relating to reading methods, techniques, procedures and materials used in increasing proficiency in interpreting the printed page. Emphasis is placed upon experimentation and research.

The success realized by the Conference is due almost entirely to the interest, contributions and excellent professional attitudes of members participating in the work of the Conference.

Oscar S. Causey

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WHAT COLLEGES ARE DOING in READING IMPROVEMENT PROGRAMS

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READING--AN INNOVATION IN THE COLLEGE CURRICULUM

Ralph C. Staiger
Mississippi Southern College

There is no doubt that reading courses, as such, have not long been included in college curricula. The first successful reading program was described in the literature a scant thirty-one years ago. In 1922 C. W. Stone reported an experiment with five classes in educational psychology at the University of Illinois and ten classes at the University of Washington. This first course has developed into many programs in many colleges.

Historical Influences

It is significant that psychology students were the subjects of the first reported experiment. College reading courses have their origin in the relatively young science of psychology.

Psychologists, and not educators, were the forebears of our college reading specialists. Valentius' interest in the perceptual process in reading during the eighteen forties and Javal's later studies of eye movements in reading, were followed by the work of Cattell, Erdmann, Dodge, Huey, Dearborn and many others. They were psychologists, interested in the phenomena which accompany reading. Their investigations, however, did much to stimulate interest in the reading process.

It has been said that the most carefully studied individuals in the world are members of sophomore psychology classes. They are under constant surveillance, and are forever being used as subjects in one experiment or another. Frequent use of student subjects was made by the early investigators of reading. This custom also influenced college reading courses.

Miss Adelaide Abell, for instance, in 1894 reported experiments on the reading rate of forty Wellesley College girls. She found that on the whole swift reading saved time without necessarily decreasing comprehension. Likewise, Dr. V. O. Quantz tested the reading rate of fifty juniors and seniors of the University of Wisconsin, and drew conclusions about their performances.

The cumulative effect of these studies and many simular experiments, together with the nurturing influence of several new factors in college curricula and the college population, led to the final development of reading courses.

The curricular change which occurred at about the end of the nineteenth century was a shift in emphasis which had important consequences. The student had, in the past, been offered only one curriculum. From the establishment of Harvard College in 1636, the prescribed subjects offered were studied--from the same books--by every student. The subjects were usually philosophy, languages, literature, and mathematics. Only a limited amount of reading, from the prescribed textbooks, was necessary.

As the nineteenth century drew to a close, the curriculum was expanded to include a great number of additional subjects, often vocational in nature rather than cultural. All students could no longer read a limited number of books to earn their college degrees, but instead many books, in many areas, were expected to be read. Wide reading became necessary as reading demands were expanded with the curriculum.

At the same time, the college population was changing. Economic expansion and prosperity enabled new groups of students to enter college; not only prospective ministers and professional scholars entered academic halls. The vocational aspects of the new college curriculum were the result of pressure from this group of students. Their interests were not exclusively verbal and intellectual; although they were the cream of the American culture, the change in the culture was reflected in the colleges. This change continued, and during the nineteen thirties and forties gained tremendous momentum. The colleges were no longer the privilege of the few; a college education became the right of any American.

As the college population changed and as the curriculum broadened to include many subjects and to require much reading on the part of college students, the need for reading improvement became evident. The work of the psychologists was put to use. Since the psychologists themselves were rarely interested in teaching reading improvement courses, this function was taken over by others, usually interested members of the English department or instructors in Education. Much later guidance people entered the field, too. Sometimes the younger psychologists were pressed into service.

Changing Emphases

In 1909, F. M. McMurry published How to Study and Teaching How to Study. This book influenced many writers and teachers, and led to the development of courses in study methods. One point which McMurry made was that reading and study are considered synonymous by many people. He cited Dr. Lida B. Earhart's Study to show how woefully ignorant students were concerning methods of study, and his own experience with teachers who were similarly ignorant. Present day instructors in college reading classes find that students still need help in study habits. The later nineteen twenties saw the publication of at least six books in this area, and many others were published and used, before and after this period. John Adams, in London, called his 1915 publication Making the Most of One's Mind, "A Guide for All Students". The obvious influence of psychologists can be noticed in these early publications, for there are chapters entitled "Manipulation of the Memory", "Nature of Study and Thinking", "The Nature of Reading."

Some of the other important books published during the nineteen twenties in this area were Bird's Effective Study Habits, Book's Learning How to Study and Work Effectively, Crawford's The Technique of Study, Headley's How to Study in College, and Yoakam's Reading and Study. Continuing interest in this area is evident from the publication of professional books at the high school level such as Brink's Directing Learning in the Secondary School, Frederick, Ragsdale, and Salisbury's Directing Learning, and Wooding and Flemming's Directing Study of High School Pupils.

Many manuals and workbooks were also published. It is significant that in general, study manuals, unlike subject matter texts, retain their usefulness throughout the years. There are many ideas contained in McMurry's 1909 volume which can be put to profitable use by present-day students.

The first emphasis in college reading courses was on study skills and habits, for study and reading were considered synonymous. With further experience, reading separate from study took on more importance.

Reading comprehension was considered an importand area in most of the study manuals, but with the development of standardized reading tests enabling objective measurement of comprehension abilities, and the emphasis on silent reading in the literature, improved reading comprehension became the goal of college reading courses. Study skills were still considered in most courses, but the emphasis shifted to the development of comprehension skills during the late nineteen-twenties and nineteen-thirties.

Rate of reading investigations were conducted by psychologists many years ago. Some emphasis was placed on improving speed of reading in the early days of college reading through the study of eye movements, and by stressing the individual's need for exceeding his accustomed rate. The development of projection devices, however, greatly stimulated the emphasis on speed reading. The tachistoscope and the metronoscope were used during the nineteen-thirties in ever-increasing numbers. Their mechanical aspects interested some teachers and administrators; manufacturers' sales efforts stimulated their use. But it was learned that the machines' use alone was not enough to improve reading. Their use as a motivating device seemed to be most justifiable.

Films designed to increase reading rate and comprehension were the next development. It is significant that with both the Harvard and Iowa reading films, supplementary exercises were published. The film alone was not considered adequate.

Reading pacers have been the latest device developed to increase reading speed. The machines all utilize the same principle: the reader sets his machine for a certain speed, and a shutter device paces him. Some manufacturers use a metal shutter, some plastic, some bars of metal or plastic, and one merely a beam of light to stimulate the reader to increase his speed. The great advantage of these devices is that they are individual, and can be used with any reading material. In all cases, comprehension is also taken into consideration. Speed is not the only objective, for speed reading without comprehension is useless. The by-products of increasing rate of comprehension--overcoming word-by-word reading, plodding, and fear of missing something--are important. Recognition of the emotional aspects of reading therapy have been a recent development in reading programs. Close cooperation with student personnel services and psychological clinics appears to be coming into the picture. Beulah Ephron's book "The Emotional Aspects of Reading" lucidly describes this development.

Present Status

Reading instruction in our colleges is still in a state of flux. There are varying emphases in different institutions. In general, an eclectic attitude has been taken by college reading specialists, much the same as the eclectic attitude of reading teachers in the elementary and secondary schools. The best in every school of thought is used, in an attempt to create finer programs, to bring maximum results. Speed reading, study habits, comprehension skills, vocabulary development are included in modern reading courses.

Great strides were made during the nineteen-forties and fifties in terms of the number of college reading services made available. In many cases the need for these services was made evident by the influx of war veterans whose need for help was pressing and whose motivation was strong. The successful courses were not built in a day, however, nor are they secure in every college curriculum.

Changes have always been made in curricula in the face of bitter opposition by conservative staff staff members with subject-matter interests. Grudging support has sometimes been given reading courses, but often they have been scorned as a means of perpetuating the unfit in college. The unfairness of this criticism is easily seen by the proponents of reading courses, but it nevertheless remains, to be revived at intervals by disgruntled colleagues.

To remain in the curriculum, reading courses must overcome this attitude by producing results which will prove their usefulness. Fads and overmechanization must be avoided. The courses must continue to be established, so that college reading courses will take a permanent place in the college curriculum.

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AN EVALUATION OF THE TACHISTOSCOPE IN READING IMPROVEMENT PROGRAMS

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This paper is based in part on research done at the University of Michigan in 1951 (32). Interest in the problem was aroused by a journal article which discussed the technique, developed by Dr. Samuel Renshaw of Ohio State University, for teaching faster reading by "training students' eyes to see better" (44, p. 20). This visual training, or perception training, is accomplished by exposing numbers containing from five to nine digits with a tachistoscope at speeds ranging from 1/10 to 1/100 second. Reading tests administered before and after a series of such training sessions are reported to show large, and in some instances even phenomenal, increases in reading speed with no loss in comprehension. In fact, an increase in comprehension also may be shown.

For example, Renshaw (27) reported that he trained three students for three thirty-minute periods per week over a period of eleven weeks, using only digits as tachistoscopic stimuli. As a result of this training, the average reading speed of the students increased from 547 words per minute to 1,137 words per minute on material selected from the Reader's Digest. On passages from a psychology textbook, the reading speed increased from 468 words per minute to 775 words per minute. Commenting on the above results, Renshaw stated that the "protocols of the students contain clear and unambiguous testimony to the fact that reading and understanding what was read was easier and surer" (27, p. 222).

In another instance, Renshaw reported a training program involving a group of executives at the Batelle Memorial Institute. This program consisted of two half-hour periods per week for fifteen weeks. Tachistoscopic materials consisted primarily of digits although some English words, Magyar words, and geometric forms were also used. Standardized reading tests administered before and after the training program showed that the average reading speed of the group had increased 27 percentile points. The average comprehension score for the group had increased 33 percentile points.

Using a similar program with a group of adults in an evening school class at Arlington, Renshaw (27) reported an average gain of 26 percentile points in speed and 33 percentile points in comprehension.

Renshaw's results suggest that there is a close relationship between the size of tachistoscopic span for digits and reading achievement. That is, if it is true that reading ability can be improved by training the individual to perceive and report longer and longer series of digits which are exposed for shorter and shorter periods of time, then it must follow that the size of the span for digits is directly related to reading ability. The study cited above (32) was begun to investigate this relationship--specifically, what is the relationship between tachistoscopic span for digits and reading ability.

The question might be asked: what does the ability to grasp unrelated digits have to do with reading ability? The cognitive processes involved in normal reading would seem to go far beyond the ability to perceive digits exposed in a tachistoscope. In any event, a study of the relationship between the size of the perception span for digits and reading ability offers a test of the intrinsic value of tachistoscopic technique. Such a critical investigation is necessary because commercial organizations are enthusiastically promoting tachistoscopic devices and materials for use in schools. Articles (18, 33) have appeared which encourage the use of such apparatus in developmental and remedial reading programs. Many schools and colleges have purchased tachistoscopes and slide materials for their reading programs. Although many claims are being made for tachistoscopic training, there is no evidence of any scientific proof of the intrinsic value of such training.

Evidence Pertaining to the Question

Research related to this problem falls into the following categories: (1) investigations involving tests of tachistoscopic perception, (2) investigations of the effect of tachistoscopic training on the span of perception, (3) investigations of the effect of tachistoscopic training on reading achievement, and (4) investigations of the realtionship between tachistoscopic span and reading ability.

Tests of Tachistoscopic Perception. These tests involve the use of a tachistoscope for exposing various stimuli and asking the subject to report what he saw. Tachistoscopic span of perception is generally determined in one of two ways. One method is to determine the length of the longest series of stimuli--letter, digits, words, symbols--which can be perceived and reported at a given exposure time. This has been referred to as the *threshold span*. A second method is to determine the number of stimuli which can be perceived and reported for a series which is larger than the subject can perceive as a whole unit in the given exposure time.

Another device which has been used to obtain a measure of eye span is the Ophthalmograph. This instrument is a binocular camera utilizing a moving film on which is recorded, by means of light reflected from the corneas of the eyes, the coordinated movements of the eyes which occur during reading. From the film records it is possible to obtain, by counting, the number of fixations or pauses in reading a line of print; the number of regressions or backward glances; and, since the film is moved by means of a constant-speed motor, it is also possible to determine the rate of reading. The number of words in the reading passage divided by the total number of fixations required to read the passage yields a measure of the span for words in normal reading, which Buswell (4) defined as the *span of recognition*. It has also been demonstrated (3) that eye-movement measures are valid tests of reading ability.

Tachistoscopic training and increases in the span of perception. A number of studies, including those by Whipple (42), Foster (14), Dallenbach (7,8,9), Gray (17), Renshaw (26, 27), Seward (31), Dolch (13), Weber (39, 41), Holland (20), Root and Root (29), and Freeburne (15), have reported that practice in perceiving quick exposures will increase the *span of perception*, or, as it is sometimes called, the *span of apprehension*: terms which Tinker (37) treated as synonymous. Whipple (42) attributed the increases entirely to the fact that, with practice, the subjects become habituated to the experimental conditions. Dearborn and Anderson (11), however, concluded that although part of the increase is due to becoming accustomed to the novelty of reading from a tachistoscope, there also seems to be an improvement which represents a real change in habits of perception. Reports by Renshaw (25, 26, 27) and a number of advocates of his technique, including Root and Root (29), MacLatchy (21), Melcer and Brown (22), and Holland (20), give ardent support to the use of tachistoscopic methods for improving perception.

Tachistoscopic training and reading improvement. There have been a number of investigations of the effects of tachistoscopic training on subsequent performance in reading. In addition to the studies by Renshaw (27) cited earlier, the same Renshaw (26) reported a program involving first-grade pupils in the Gary, Indiana, school system. Experimental and control groups were set up on the basis of intelligence and socio-economic ratings. The experimental groups were three clases from three schools selected to represent high, medium, and low socio-economic levels. The three control groups came from comparable schools. The means and ranges of the intelligence ratings of the two classes from the two schools of comparable socio-economic level were reported as being closely similar.

The children in the experimental groups were given three twenty-minute periods of tachistoscopic training per week throughout the school year. Children in the control groups were reported to have been given exactly the same type instruction as the experimental groups except for the tachistoscopic training. They were, however, in different schools and under different teachers. As a result of this experiment, Renshaw concluded that:

> . . . the evidence . . . is clear and unambiguous: Children who have had adequate tachistoscopic training in the first grade read more fluently and understandingly, show distinctly greater skill in number work, exhibit greater range, quickness and accuracy in general observational noting, in art work, etc., than children of equal native ability,

> under teachers of equal competency in the same curriculum, who have not had this form of visual training. (26, p. 1).

From a closer inspection of the data presented, however, it appears that these claims are based on a comparison of the test scores of the *experimental* class from the *high* socio-economic school with the test scores made by the *control* class from the *medium* socio-economic school. An inspection of the mean intelligence ratings of these two groups shows a difference of 10.8 I.Q. points in favor of the high socio-economic group. Renshaw apparently justifies such treatment of the data by the statement that "teaching in the Ambridge (high socio-economic control) group is rated as superior, and in the Edison (high socio-economic experimental) and Jefferson (medium socio-economic control) groups, as average" (26, p. 4). Such treatment of data would certainly raise serious questions concerning the validity of the conclusions drawn from the data.

MacLatchy (21) describes a program using Renshaw's technique with a group of elementary school pupils at Bexley, Ohio. The program began with the first-grade pupils in 1944 and continued with the same group in the second grade in 1945. Scores on two reading tests given at the end of the first grade showed the average of the Bexley pupils to be approximately six months above their grade placement. At the end of the first semester of the second grade, scores on a reading test showed the Bexley average to be approximately seven months above their grade placement. At the end of the second grade, scores on two subtests of the Durrell-Sullivan Reading Achievement Test placed the Bexley average at six to eight months above their grade level. These "marked gains" in reading were attributed to tachistoscopic training. However, other techniques were also introduced into the reading program, and no attempt was made to show how much of the "gain" was due to tachistoscopic methods as compared with other innovations in the reading program.

Melcer and Brown (22) credited tachistoscopic methods with rapid gains in first-grade reading. Their study was conducted at the Danforth Elementary School in Texas City, Texas. While these authors made a pretense of setting up a control group, they actually did not have two equated groups. Among th grosser discrepancies was the fact that the experimental group contained forty-five Mexican children, most of whom spoke Spanish at home, and very few of whom could speak English before entering school; th remaining part of the experimental group consisted of thirty American children whose intelligence scor were "somewhat above average." The control group w made up entirely of American children who, for the most part, were "average or superior in intelligenc and "a few" of them were "inferior."

The experimental group was given tachistoscopic training beginning with geometric forms, going on t "extensive" training with digits, and some lessons recognition of words and phrases. "Children who seemed to be having great difficulty were assembled in small groups and given special help and instruction" (22, p. 1218). At the end of the training pe iod, the experimental group had made a gain in read ing test scores of 16.45 points. The control group had made a gain of 12.65 points over the same peric No attempt was made to establish the significance c the difference in gain between the two groups. The authors concluded with the statement:

> It is hoped that this experiment will prove to be of some value in establishing the fact that tachistoscopic training is unquestionably an invaluable aid in promoting good skills in many phases of work of the school curriculum (22, p. 1219).

The conclusions of the preceding studies seem be based on the post hoc ergo propter hoc fallacy. There is also the unfortunate tendency to attribut all of the gains to a particular technique and to ignore other variables in the experimental situatic

Reference to these studies is included here because of their contribution but to indicate the caliber of some of the material which gets into the literature.

Among the more objective studies, Sutherland (investigated the effect of tachistoscopic training on rate of reading. Her subjects were freshmen in remedial reading groups at the University of Iowa.

The experimental group was given tachistoscopic training with words and phrases; a second experimental group was enrolled in a regular freshman reading class in which training centored around the Harvard Reading Films and the Wilking and Webster College Developmental Reading Manual (43); a third group served as controls. Following tachistoscopic training, the first experimental group was also enrolled in regular freshman reading classes. No data are given regarding the equating of the groups other than that all scored below the mean on rate-of-reading entrance tests.

Results showed that, with tachistoscopic training, the first experimental group began the remedial reading classes at a higher level and made greater initial gains in reading achievement than did the second experimental group. By the end of the reading training, however, the former group had lost this advantage. Both experimental groups made reading test gains significant at the 1 per cent level of confidence, but the net gains of the group which wnet directly into the remedial reading program exceeded the net gains of the group which received the tachistoscopic training prior to the remedial program. It is unfortunate that a measure of comparison was not obtained between the reading ability of the first experimental group before quick-exposure training and the reading ability of the second group before beginning the remedial program. Although Sutherland concluded that perceptual span training given before direct instruction in reading may facilitate the students' progress, the data reported do not necessarily substantiate such an inference.

An interesting outcome of Sutherland's (36) study was that the control group, which had received no special training of any type, also made gains significant at the 1 per cent level of confidence on one reading test and gains significant at the 10 per cent level on a second reading test. The implications of this finding will be considered later.

Weber (41) conducted a study involving two experimental groups and a control group at Wells College. His first experimental group was given tachistoscopic training beginning with presentations of nonsense forms and words and ending with complex sentences. His second experimental group worked under supervision with exercises from L. C. Pressey's manual of Reading

Exercises for Freshmen (24). Following the training period, reading tests showed that there were no essential differences in the gains produced by the two experimental methods. A comparison of the scores made by the experimental groups with scores made by the control group showed that the former gained 12.1 per cent in comprehension while the latter gained 7.3 per cent. The experimental subjects gained 36.1 per cent in rate, while the control subjects gained 15.6 per cent.

Freeburne (15) also investigated the influence of tachistoscopic training on reading ability. His subjects were freshmen in the remedial reading program at the University of Iowa. Tachistoscopic training was given with words and phrases. Reading tests after the training period showed significant gains in reading ability for both the experimental and control groups. (It should be noted that Freeburne is among the few investigators who reports taking into consideration the effect of the regression phenomenon on test scores in a testretest situation with individual at the extremes of a distribution. He reports that the mean gains were corrected for regression toward the population mean.) Analysis of his results showed that there was no significant difference between the mean gains of the experimental group and the mean gains of the control group.

As a part of Freeburne's (15) investigation, the initial and final tachistoscopic tests were administered to the control group. Freeburne attempts to explain the gains in reading made by the control group on the basis of the hypothesis that the training received by the control groups during the two administr tions of the tachistoscopic test was sufficient to account for the significant (1 per cent level) gains in reading. It is difficult to understand how significant gains in reading ability can be attributed to training received from two such tachistoscopic tests administered at an interval of three weeks. There is basis for skepticism also in the fact that when Freeburne correlated tachistoscopic span scores with his various measures of reading ability, he found correlations ranging from .123 to .292. Only one of the coefficients was significant at the 1 per cent level of confidence. In spite of the statistical significance of this correlation, the question still remains as to whether or not this relationship is high enough to be held accountable for the gain in reading scores. Still further basis for skepticism is found in the correlations of the increases in perception span scores with the increases in reading scores. All were negative and ranged from -.051 to -.222. This finding certainly could be interpreted as evidence that gain in span is not closely related to gain in reading.

A number of service schools have instituted remedial reading programs in their officer-training courses. These programs generally consist of tachistoscopic training combined with paced reading practice with a reading rate controller. Such a reading program at the United States Air University (1) produced remarkable gains in reading rate without sacrificing comprehension. Materials exposed for quick perception training included digits, words, and phrases. Unfortunately, the relative contribution of the tachistoscopic exercises and practice with the rate controller was not investigated. Allen (2), however, reporting on a program at another service school, concluded that the use of the tachistoscope, when compared with other methods of supervised reading practice, was of little consequence.

Investigations of the realtionship between tachistoscopic span and reading ability. A few investigators report having tested the relationship between perception span and measures of reading ability.

As mentioned earlier, Freeburne (15) correlated perception span scores with reading test scores. The coefficients ranged from .123 to .292. His tachistoscopic presentations consisted of words and phrases. As a part of another investigation, Buswell (6) flashed numbers ranging from three to nine digits and administered a rate of comprehension test. The correlation of .16 was reported between these two variables. Sutherland (36) found correlations ranging from .31 to .37 between tachistoscopic span for words and measures of reading rate.

To return now to the initial issue which prompted the current investigation. As a result of his own investigations and a review of selected investigations reported by others, Renshaw concluded that "tachistoscopic training with digits, if carried well toward the shoulder of the curve, will produce significant increases in reading comprehension and because of this, in speed" (27, p. 222). The conflicting conclusions drawn from the investigations reported above cannot be taken as conclusive evidence either to substantiate or to refute the rather extravagant claims made by Renshaw. Only the studies by Renshaw, himself, reported exclusive use of digits in the tachistoscopic training program. Further evidence was needed to clarify the relationships involved. Since many investigators use words and phrases for tachistoscopic training, it was also decided to investigate the relationship between tachistoscopic span for words and reading ability. In addition, the relationship between perception span and recognition span was included in the study.

The Study

The investigation was carried on during the summer and fall of 1951. Subjects of the investigation were ninety-seven volunteers from the elementary course in Educational Psychology at the University of Michig[illegible]

Among other factors investigated, the following measures were obtained from each subject: two measures of tachistoscopic span for digits--(1) the threshold span and (2) the number of digits perceived when the stimulus series was greater than the threshold, referred to as the _mean span for digits_; tachistoscopic span for words; a rate of reading score obtained while the subjects were reading three 1,000-word passages from Strang's _Study Type of Reading Exercises_ (34); the level-of-comprehension score from the _Cooperative English Test_, _Test C2_: _Reading Comprehension_; and the speed of comprehension score from the same instrument. Photographic records of eye movements while the subjects read a passage of Grade XII difficulty yielded measures of the size of the fixations in normal reading and measures of rate of reading.

In order to test the relationships under consideration, Pearson productmoment correlations were run between the variables concerned.

Results

Table I shows the correlations between the measures of tachistoscopic span and recognition span. None of the coefficients achieves statistical significance at even the 5 per cent level. Thus, no apparent relationship was found between the size of the perception span and the size of the span used in normal reading--as measured by the techniques used in this investigation.

TABLE I

CORRELATIONS BETWEEN MEASURES OF TACHISTOSCOPIC SPAN AND RECOGNITION SPAN

Tachistoscopic Span	Recognition Span
Digits	
Threshold Span	.162
Mean Span	.027
Span for words	.179

Table II shows the correlations between the measures of tachistoscopic span and measures of reading ability.

TABLE II

CORRELATIONS BETWEEN MEASURES OF TACHISTOSCOPIC SPAN AND MEASURES OF READING ABILITY

Tachistoscopic Span	Strang Passages	Eye Movement Passage	Comprehension	
			Level	Speed
Digits				
Threshold	.139	.073	-.035	-.031
Mean Span	.113	.125	-.182	-.210[b]
Span for Words	.213[b]	.055	.183	.084

[b] Indicates significance at the 5 per cent level of of confidence.

The correlation between tachistoscopic span for words and rate on the Strang passages is the only positive correlation to show statistical significance, and that is at the 5 per cent level. The correlation between mean span for digits and speed for comprehension is also significant at the 5 per cent level but the coefficient is negative.

Thus, these findings have not demonstrated that either tachistoscopic span for digits or tachistoscopic span for words as much in common with measures of rate and comprehension as measured by techniques used in this investigation with the population involved. In the absence of such evidence, it is difficult to see how tachistoscopic training can have much effect on reading performance.

Discussion of Results and Implications

There are a number of other facts which cast doubt on the intrinsic validity of tachistoscopic training. For one thing, many experimenters have demonstrated that the size of the tachistoscopic span for words greatly exceeds the size of the fixations in normal reading. Robinson (28) found that tachistoscopic span was more than twice as large as span in normal reading. Walker (36) supports this finding. Harris (19) found tachistoscopic span to be more than three times as large as span of recognition. In the present investigation, tachistoscopic span for words was 2.9 times as large as fixation span. These findings seem to indicate that rarely, if ever, does an individual even approach in his fixations in normal reading the size of his perceptual span in tachistoscopic reading. That is, normal readers already have a greater range of apprehension than they ordinarily use. If the total tachistoscopic span for words were used in reading, the average adult would require only two to four fixations to read an average line of print. However, investigations (33) have shown that average readers will make as many as six or eight fixations per line of reading. In fact, in a study of eye movements of superior readers, Walker (36) found an average of almost eight fixations per line. Dixon's (12) results are even more striking. He found that college professors averaged 8.56 fixations per line on the passage read before the eye-movement camera.

Further evidence on this point is to be found in the fact that, generally, an individual will read familiar material more rapidly than he will read unfamiliar or difficult material. It would seem that, in the case of reading the unfamiliar or difficult material, the eyes must, in effect, "mark time" while the mind is "catching up" with them or comprehending what the eyes are perceiving. This idea is borne out by Ruediger (30) who condluded that rate is, in the main, determined by the rapidity with which meaning is aroused after the words are seen. That is, it is not a matter of getting the material to the brain, but of assimilating it after it gets there.

Research by the Army Air Forces Aviation Psychology Program (16) has discredited the claims that tachistoscopic training with digits will increase the general efficiency of perception and widen the angle of vision. Their findings show that while digit training did lead to a significant improvement in digit scores, it did not improve the subjects' proficiency in recognizing aircraft. A more significant finding was that the results of quick-exposure training did not generalize to the extent of improving performance on the test of perceptual efficiency, the Flexibility of Attention Test, CP 411E (16, pp. 82-86), employed in the investigation.

Since the completion of the study currently reported, Manolakes (23) has reported an experiment carried out at the Marine Corps Supply Schools. Although the number of subjects involved (thirty-four) was rather small, the results are interesting. The subjects, who were Marine Corps officers under instruction at the Supply Schools, were divided into two groups equated on the basis of age, intelligence test scores, initial reading rate, initial comprehension score, and educational level.

Both groups spent eighteen 25-minute training sessions on the Reading Rate Controller. The "Control" group had, in addition, eighteen $12\frac{1}{2}$-minute training sessions with the tachistoscope using digits as stimuli, and also nine $12\frac{1}{2}$-minute periods devoted to the development of vocabulary and an equal number of periods for the development of comprehension skills. Training for the "Experimental" group differed in that no tachistoscopic exercises were provided. The time allocated for such training in the control group was utilized in providing a "broader program of training in vocabulary and comprehension skills." (23,p. 411)

At the end of the training period Manolakes (23) found no significant differences between the groups in the reduction of the number of fixations, the increase of the span or recognition, or reduction of the duration of the fixations. There was a significant difference in reading rate, however, but this was in favor of the "experimental" group.

How, then, can the claims which are made for tachistoscopic training be reconciled with the above indictments? The answer probably is that the improvement which has been attributed to these methods is actually the result of certain secondary factors which are not inherent to the method.

It has been adequately demonstrated that gains in reading achievement can be obtained by many different types of training programs whether they involve quick-exposure training, pacing devices, exercises in interpretation, some special reading manual, or a how-to-study program.

Investigations which have compared tachistoscopic training with other types of training programs have found no significant differences between the improvement in reading brought about by these methods. Quick-exposure training shows no superiority over any of the other methods. If the method employed in the reading program is not the determining factor in reading improvement, how, then, can the improvement be accounted for?

One suggestion that has been made is that many individuals adopt reading practices which are below their capabilities; that is, their reading performance is nowhere near their capacity. Weber (40) indicates that slow reading in the average adult bears all the familiar earmarks of habit. Buswell (5) feels that a narrow span of recognition becomes habitual with the reader and that the span is habitualized far below the reader's possibilities. If this concept of the cause of slow reading is true, then any pressure which tends to break down these inefficient habits could bring about an improvement in reading achievement. Thus, quick-exposure training may give the individual a mental set toward perceiving a larger unit in one glance than he has been accustomed to. Pacing devices may force higher levels of speed on readers who have become habituated to lower levels of performance than they are capable of attaining.

However, reading programs which make use of no mechanical devices produce gains in reading as large as, if not larger than, those programs which do use artificial devices. The answer to this quandary has been suggested by several authors, most notably Dearborn (10), who indicated that "motivation through the change of the set of mind or the intention of the learner is a more important factor in remedial reading than the particular methods and materials of instruction" (10, p. 1). Accordingly, "methods which are intrinsically not even sound or sane, may, because of the novelty of their appeal and their assurance of success, arouse the student to new hopes and efforts at improvement" (10, p. 1). Referring to perception-training devices, Dearborn says, "What these methods may do is increase perceptual span by offering the reader more motivation. That is, they succeed not by stretching the visual span but by spurring the mind" (10, p. 6). In other words, the motivation which is associated with almost any method that is tried may account for the resulting improvement as much as the method itself.

From the results of those studies which employed a control group, it can be inferred that much of the gains in reading achievement reported for the subjects in the reading programs can be attributed to factors other than the training because the untrained students also made significant gains in reading achievement. It would seem that the mere passage of academic time appears to account for some improvement in reading. There is the probability that, at the college level, the amount of reading material which the student is expected to cover in a given time is in itself a spur to higher levels of reading achievement than those to which the individual has become habituated.

The principal conclusion to be drawn from this investigation is that no significant relationship has been found between measures of tachistoscopic span and the measures of reading ability employed. It follows by implication that quick-exposure training, in and of itself, cannot influence the process of reading except as certain secondary factors, such as motivation, are involved.

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RECENT RESEARCH RELATIVE TO COLLEGE READING

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With a few exceptions, the research reviewed in this paper has been limited to that found reported in the periodical literature since the last Southwest Reading Conference (44) and to that reported during 1952 which was not covered in the review of research presented at the last conference.

Results obtained in a number of reading improvement programs have been reported. Methods used in effecting improvement varied widely, both within and between programs, as did also methods used in measuring results and types of analyses of results made. Smith and Tate (42) found reading rate controllers settings, tests based on senior high school level materials, and Smith-Moler Test results all indicating substantial rate gains for a small group of University of Kansas students participating in at least 25 and up to 70 sessions. Tachistoscopic projectors and reading rate controllers were used in the program. Speed on the rate controller rose rapidly and did not appear to have reached a maximum for 2 subjects completing 70 sessions. Actual rates indicated by the tests, while substantial, were considerably lower than rates indicated by the controller; and gains indicated by the Smith-Moler Test were accompanied by some drop in comprehension. Students participating in a Northwestern University program used a great variety of procedures and materials (53). Substantial gains were indicated by Iowa Silent Reading Test total scores and, purportedly, comprehension scores also tended to improve. Average reading rates on relatively easy materials progressed from 272 to 474 words per minute. Purdue University's reading course for average and superior readers used Harvard Reading Films, the SRA accelerator, group and individual tachistoscopes, and a series of difficult readings in the field of science (13). Comparison of Diagnostic Reading Tests scores of 307 participating freshmen and a control group of 282 non-participants showed speed gains of 62 percent and 9 percent, respectively. The experimental group made small, but significant, gains in vocabulary and general comprehension also. Johnson (24) found that reading ability had improved to about the same extent when he compared results obtained with a group in which reading skills had been taught directly with those obtained with a group in which psychotherapy was considered only with reference to the psychology of learning.

A number of army and air force programs have also been reported. Locally constructed tests over material used in the 20-hour program reported by Staton and Maize (45) indicated gains for over 1800 Air Command and Staff School Officers, from a beginning average rate of 294 words per minute to 651 words per minute (122 percent gain), with comprehension progressing from a beginning 75 percent to 79 percent. The training sessions involved a short period of tachistoscopic recognition exercises, utilizing a reading rate controller before reading meaningful material which increased in difficulty as the course advanced. Changes, described by Jackson (22), made in the program the following year entailed greater emphasis on training in comprehension skills. Results obtained with *Harvard Reading Tests* (found more difficult than most of the materials used in the program) showed some rate gains, and some comprehension gains, for six groups participating in the revised program; but these gains were considerably less than the words-per-minute gains shown in the old program (when simple test measures were used). Because of data limitations, only "rough comparisons" were made of results obtained with the *Iowa Silent Reading Test* and locally-constructed rate-comprehension tests in the program of the Quartermaster School, Ft. Lee, Va. (1). Reading instruction consisted of three equal phases: reading rate controller exercises with recreational reading materials, tachistoscopic exercises, and use of a work manual and supplementary exercises for application of reading skills. Some gains, but rather moderate ones, were indicated. While scores of Advanced Officers receiving 29 hours of instruction were slightly higher than scores of Basic officers receiving only 19 hours, average increases offered little evidence of value received for extra time spent. Resulting revisions in the program included curtailing of time for tachistoscopic exercises, including such practice during the same period as rate controller practice, and providing additional time and materials for practical reading exercises. Gains made by a group in the revised 20 hour program were greater than those made in the old 29-hour program and were considered "quite impressive" in view of the lesser time involved for the former group.

The basic education program of the Army's Information and Education Center, Fort Lee, Va. was reported briefly by Miles (32). During an experimental period of approximately five and one-half months, 255 out of 391 recruits, who originally were unable to absorb military training because of inability to read and write English and to do simple arithmetical problems, were able to pass an U. S. Armed Forces elementary knowledge test after 25 days of 4 hour instruction each. Forty-two out of an additional 68 were able to pass the examination after an additional 100 hours of instructio

Large groups of businessmen attracted to a reading program at the University of Pittsburgh were reported to have made unusual progress (8). Business clients at the Reading Laboratory of New York were reported to have been able to work at their own paces, with individual equipment, toward the goal of 600 to 700 words per minute, beginning with an average rate of 250-words per minute (8). Some were able to exceed the goal considerably, with a record of 3,750 reportedly being set by a Chicago lawyer. Reading efficiency classes for business men and industrial executives in the Detroit area met an hour and a half a week for 10 weeks and included regularly a reading speed check on a standard thousand-word exercise, discussion of a topic in the reading skill area, and 1 or 2 of the Harvard Reading Films. Results obtained with the Nelson-Denny Reading Test, Michigan Speed of Reading Test, and reading speed checks showed gains which were highly significant statistically.

In addition to use of standarized tests and other measures in evaluating programs, several studies of reactions of participants to programs were made. Questionnaire responses obtained in Kingston's Texas A and M program (25) revealed that, although 64 percent felt the course was too short to develop adequate reading skills, 97 percent felt it had helped them to improve basic reading skills and 86 percent thought they had been aided in studying assignments. Only 35 percent indicated that they did more recreational reading, although 64 percent indicated they enjoyed reading more than before. Students enrolled the following semester responded very similarly (44: 10-13). Eighty-four percent of the officers in the original Quartermaster School reading course felt greater reading ease and/or ability, according to Allen (1), 75 percent thought the course should be lengthened, and 81 percent considered the course as good or better than other subcourses taken. The favorable responses might be considered surprising in view of the relatively small gains made in the program. Questionnaire responses of officers in the revised program were even more favorable. A slight majority (56 percent) of 118 randomly selected officers in the Air Command and Staff School program (45) ranked the course as highly effective only in increasing speed (the skill which received major emphasis). A considerable portion, larger than would be expected in view of test results, ranked the course moderately effective in aiding improvement in general areas of comprehension. Eighty percent of the Northwestern University students indicated their course had been of value in their college work (53).

Few specific attempts to determine the relative value or contributions of any of the various procedures employed were reported; but several studies have yielded suggestive indications. Sheldon (41) stated that none of the many varied techniques used in the Syracuse University reading course seemed appropriate or efficient when used alone, leading to an inference that improvement effected was perhaps due to varied techniques and procedures in combination.

Smith and Tate's study (42) was an attempt to determine amount of improvement which might accompany use of tachistoscopic projectors and reading rate controllers. Half the time of each session was devoted to work with each machine. While substantial improvement was indicated by the tests used, these gains were not nearly as great as those indicated by rate controller settings. It was not possible to determine the relative contribution of each machine. Manolakes (30) studied the effects of tachistoscopic training upon reading improvement of matched experimental and control groups of Marine Corps Supply School officers. Training of the experimental group differed from that of the controls in that no tachistoscopic training was provided, the time allocated for this having been included in a broader vocabulary and comprehension program. Comparison of results of eye movement records after training showed no significant differences between the groups. Rate increase differences were significant, however, favoring the experimental group--the group without tachistoscopic training.

Kingston's students indicated, by questionnaire responses, that they felt the reading rate accelerator and the reading films had been most helpful (39 and 35 percent, respectively) and that the tachistoscope had been least helpful (41 percent) (25). It was pointed out that each technique had not been given equal emphasis. A considerable portion of Quartermaster Officers rated, on questionnaires, the tachistoscope as being of least value also (1); manual practice exercises were rated as being of greatest value. This reaction, plus purported opinion in the field, led to previously noted revisions in which the tachistoscope phase was drastically reduced. Officers in the revised program reacted similarly. Questionnaire responses of Northwestern University students indicated that applying reading techniques to college materials, individual work with instructors, and vocabulary building activities had been most helpful (53). Tachistoscopic training, one of numerous activities in the program, was not regarded as having been particularly helpful.

Reasons for use of the rate controller for recognition exercises instead of the tachistoscope, which had been discontinued after having been used in the past, were not given by Staton and Maize (45). The last test of reading speed in the program they reported gave results which were 135 words per minute slower than test rate results obtained with the controller at the end of 16 periods. Smith and Tate (42) noted a similar lact of transfer and raised the question of the level to which speed and comprehension had been built.

Snyder (43) described the use of a Flashreader, a device which moves down a page and is "flipped" for each line by the reader. Several desirable results were claimed, but he presented no objective data. The chief value seems to lie in stimulation and maintenance of interest. The group tachistoscope, which had been used, did not appear to sustain the same interest. Possible motivational values of the tachistoscope have been noted frequently (1; 25; 54).

An attempt to improve reading speed and comprehension without "elaborate machines or expensive equipment" was described by Andrews (3). He reported that after two months of twice-a-week sessions of one-minute speed exercises with simple material students read at rates varying from 250 to 1,000 words per minute. "Tests" were mentioned but not identified.

A number of reports dealt, in whole or in part, with varied types of analyses or descriptions of reading tests. Witty (54) called attention to limitations in tests of reading speed and comprehension, such as being limited to types of materials covered, inadequacy of length, limitations in measuring rate of reading validity, and lack of tests for measuring certain reading comprehension abilities. Traxler, in an earlier study (48) also pointed out the need for using care in test selection. In twenty-eight group silent reading tests yielding three or more scores, he found forty-nine types of reading ability covered, with twenty-three being included in only one test. One-fourth or more of the tests used subtests of word meaning or vocabulary, paragraph comprehension or meaning, sentence meaning, rate of reading, and story comprehension.

The *Diagnostic Reading Tests* have been involved in a number of analyses, as has also the *Cooperative English Examination, Test C2*. Two small books devoted to the construction, validation, interpretation and use of the *DRT* have been published (11; 12). None of the *DRT* Survey Section scores of 200 Hunter College students were found to correlate as highly with an index in American History as did scores on the *Cooperative English Examination, Test C2* (4). All multiple correlations obtained when *ACE Psychological Examination* scores were combined with *Test C2* scores were also higher than any obtained when *ACE* and *DRT* scores were combined. A combination of *C2* vocabulary and comprehension scores correlated practically as highly with the history index as did a combination of *ACE* total score and *Test C2* scores. Correlations obtained in a study with Michigan State College students indicated that the *DRT* and *C2* were equally related to the *ACE* at a fairly high level, that Forms A and B of the *DRT* were comparable forms, and that the *DRT* and *C2* were positively related but not sufficiently enough to be considered equivalent tests (23). 2

Witty, Stolarz, and Cooper (53) reported a correlation of .36 between scores of 114 students on the *C2* and their scores on the *Iowa Silent Reading Test*, suggesting that the two tests might be measuring somewhat different phases of reading. The varying content of the tests as well as the select nature of the group (the *C2* scores were among the lowest 15 percent among the scores of entering freshmen) might have been important factors in the relatively low relationship. Traxler (49) reported that the *C2* "is without doubt sufficiently difficult for even very able graduate students."

In a study by Frederiksen (20), one group of Princeton freshmen was given the *C2* under conditions of standard timing and directions; the other with separate timing of Part I (Vocabulary) and Part II (Reading), with Part II not being begun until time for Part I had been called. It was found that separate timing produced no significant changes in means and standard deviations of test scores, in predictive value of scores, in the intercorrelations of scores, or in their correlations with other predictive measures. Modifying the instructions for Part II by having students read the item questions *before* reading the selections also failed to produce significant differences. These findings seemed to warrant permitting administration of the test to remain simple.

Preston and Botel (36) obtained a significant correlation of .48 when rate and comprehension scores on the *Iowa Silent Reading Test* were obtained under the standard timed conditions. Without time limits, a nonsignificant correlation of .20 was found, leading them to conclude that under untimed conditions rate and comprehension are relatively independent of one another. When *DRT* vocabulary test scores obtained under timed and untimed conditions were compared, a correlation of .66 was found; but they considered this relationship too low for predictive purposes and regarded the timed test as practically a different test from the untimed one.

Several reported programs used the *Harvard Reading Tests*. These tests were considered more difficult in the Purdue program (13) than the *DRT*; but a greater percent of increase in speed was indicated with the *Harvard Tests* than with the *DRT*. However, use of the *Harvard Reading Tests* in the Air Command and Staff School reading program gave indications of smaller rate gains than had been indicated for most officers with previously administered tests which involved less difficult materials (22).

Three reading tests were included among the tests to which Forbes (19) applied five different readability formulas. The average grade placement levels obtained with the five formulas were middle-eleventh-grade for the Cooperative English Examination, Test C2, and the Minnesota Speed of Reading Test and middle-tenth-grade for the SRA Reading Test. However, with his new and simplified method for determining readability of standardized tests, he obtained a rating of high-eleventh-grade for the Minnesota Test, middle-tenth-grade for the C2, and high-ninth-grade for the SRA Test. The grade placement estimates obtained with the other five formulas yielded ranges of five to seven grade levels for each test.

Smith and Tate (42) used the Smith-Moler Test of Reading Efficiency as one of the measures of improvement used in their reading program. The test measures reading rate and comprehension on selections of three levels of difficulty (seventh grade, college freshmen, and college graduate levels). It has not yet been published. Nichols and Keller (34) reported the development of the Listening Efficiency Test which was used to measure improvement in listening skills attained in communication courses. Comparison of trained and untrained groups provided evidence that listening skills were readily amenable to training. They also used one form of the Purdue Placement Test in English, Part V, in the regular manner as a reading test and another form as a listening test by having examiners read selections and items. All reading-listening correlations were significant, the highest being in the reading-emphasis section. The greatest mean difference, a significant one, was found in the listening-emphasis section.

Carillo and Sheldon (9) have suggested a tentative design for a test which provides for a natural reading situation and which measures the flexibility of approach to different reading situations.

Hall (21) found that over half of a group of students tested with the Nelson Silent Reading Test showed an increase in scores when background music was used. The major source of increase was in accuracy, and students of below average intelligence and achievement benefitted the most. General student reaction to background music was favorable.

Readability has continued to receive considerable attention. Klare (27) concluded, as the result of an extensive evaluation of five readability formulas, that the Gray-Leary, Flesch, and Dale-Schall formulas measured much the same aspects of readability, with differences between the three being slight. He attributed differences in ratings to differences between tests on which the formulas were based and to particularlimitations of the formulas themselves rather than to difficulty of materials measured or sampling errors. The meaning of grade ratings for adult materials was questioned.

The five different formulas Forbes (19) applied to twenty-seven selected tests commonly used for counseling purposes were found to be correlated significantly, (the rank-order correlations among the Dale-Schall, Flesch, and Lorge being the highest, those involving the Lewrenz and Yoakam being among the lowest); but definite differences in results for the various tests by the five formulas were noted (as much as 9.1 grades between ratings determined for a single test by two formulas). Forbes presented a simplified formula which bases vocabulary difficulty on weights assigned to words in the *Thorndike Junior Century Dictionary* (1942 rev. ed.) and which requires only half an hour to apply to a test.

Quantitative results obtained by Russel and Fea (38) in their analysis of six formulas suggested that the Dale-Schall, Flesch, and Lorge formulas were about equally good measures of difficulty of children's books, in view of the ratings given twelve selected books by 63 librarians. Correlations based on the limited samples suggested, however, that the Flesch formula did not usually give books the same comparative rating as the other two and that the Winnetka formula rated them much as did the Dale-Schall, only at a level two grades higher.

Swanson and Fox (46), studying the effect of "easier" and "harder" versions of twelve articles printed in a company newspaper, found no significant differences in retention; however, they did find significant differences in comprehension. Results obtained suggested motivational factors inherent in content might be the most crucial factor where individuals select what they want to read and learn; but where individuals are required to read and study, as in classroom and training situations.

Maloney (29) found the directions and items in File's How Supervise?, a test of supervisory quality, to be at the difficult level (Flesch formula). He concluded that the test could be read only with difficulty by the average foreman and, therefore, was of doubtful validity as a measure of supervisory ability for lower level personnel.

Witherington (52), applying the Dale-Schall formula to eight recently published educational psychology textbooks, found them to range from tenth to twelfth grade level in difficulty and concluded that all were appropriate, in view of readability, for the types of classes for which intended. Allen (2) found that oral commentaries of factual instructional films written one grade level below the present grade placement of sixth grade pupils resulted in significantly greater learning than did commentaries written one grade level above. The Flesch, Dale-Schall, and Lorge formulas were about equal in predicting comparative readability of commentaries; but the Lorge consistently predicted about two grades lower than the Flesch and the Dale-Schall varied in its prediction.

England, Thomas, and Paterson (16) reported a study of reliability of the original Flesch formula and the simplified Flesch formula which had been proposed earlier by Farr, Jenkins, and Paterson (17) and had been criticized by Klare (26) and Flesch (18). Reading ease scores computed by 14 relatively inexperienced analysts and an experienced analyst yielded results which confirmed earlier reliability studies and showed that both the original and simplified Flesch reading ease formulas were highly reliable. Dunnette and Maloney (15) found that the simplified formula could be applied by naive subjects with a greater degree of accuracy and in less time. They concluded, therefore, that is was truly a simlified formula operationally.

A number of studies were concerned with various reading abilities and characteristics. Krise (28) investigated the relations between reversal tendencies and each of a number of factors which have been posited as causal factors. A highly significant correlation (1 percent level) was found for space relations ability, lending support to the theory that difficulties in space relations, or confusions in figure-and-ground relations, give rise to reversals in reading. In a study by Triggs (50), ability to divide words into syllables showed some growth from Grade 6 through the college freshman level, but Triggs found very little growth evident on ability to hear and match sounds from Grades 6 through 13. Schubert (40) has 26 Los Angeles State College retarded readers take two forms of the vocabulary test of the California Reading Test to measure reading and hearing vocabulary. One form was given as a reading test, the other as a hearing test. She found no significant differences between the two mean scores.

Menon and Patel (31) found that test results indicated slow reading rates for 70 teachers in training at a secondary teachers college. A slight negative correlation between rate and comprehension was found for the group; but it was reported that good readers were never slow and fast readers were never poor. Thirty college students in a study reported by Perry (35) were found to read Arabic numerals significantly faster and with significantly greater accuracy than they read Roman numerals. Tinker (47) found the influence of small type, vibration, and use of italics to be cumulative and to produce relatively large drop in speed of perception.

Using a questionnaire approved, Schubert (39) attempted to ascertain factors which might differentiate poor college readers from good ones. Fifty retarded readers and 50 unselected cases of the same sex and grade status were sampled. Poor study habits were indicated for the retarded readers. Items which seemed contingent upon emotional factors (such as nervousness in class discussion, oral reading, and taking examinations) were experienced more often by them also. The investigation revealed, however, the possibility that apparent causes of reading retardation might be results of the condition. A group of Northwestern University upperclass students participating in the reading improvement program (53), while not seriously retarded according to test norms, exhibited relative inflexibility in rate, lack of various critical comprehension abilities, and lack of ability to concentrate and to sustain effort upon difficult materials. Smith and Tate (42) used Minnesota Multiphasic Personality Inventory results in comparing the 4 students making the greatest and the 4 making the least gain on the reading rate controller. The least gain group appeared to have more emotional distractions--greater anxiety, psychasthenic behavior, and tendencies toward paranoia; but the very few numbers of cases did not warrant any definite conclusions.

Dowd (14), studying the best and poorest achievers among those in the highest decile of the ACE Psychological Examination, found differences between groups on reading ability existed on a relatively high level. Generally, students in both groups were in the upper half of the class on reading level; but a large proportion of non-achievers fell just above the mean while most of the achievers fell in the highest range of scores. Dowd concluded that specific impingements of the college situation were not responsible for underachievement in high capacity students but that factors operating to lower academic efficiency had also operated to depress the same in the earlier school environment. Bond (17), studying disparity between capacity and achievement among senior high school students, found high ability pupils indicating not only the tendency to spend a disproportionate amount of time on courses liked best as an important obstacle, but also poor study habits developed in lower grades when success came easily. Carter and McGinnis (10), comparing the 100 freshmen having the gighest point-hour ratios and the 100 having the lowest, predicted that one apt to become a superior student would have, among other things, a reading test score in the upper quartile and would claim to have read five books and six periodicals during her senior year in high school. One apt to become an inferior student would have, among other things, a ranking in the lower third on reading test score and would claim to have read three books and five periodicals during his senior year.

Only one reported investigation of the effects of a reading program upon academic achievement was found. Mouly (33) agreed with Robinson (37), cited and discussed in the review of research last year (6), that the final criterion for the success of a remedial reading program is the improvement of the academic grades. He compared honor-point ratios of 106 students who had successfully completed a course in remedial reading with the ratios of a control group of 164 students who had scored equally low on the initial test but who had not taken the course. He found significant differences favoring the reading group and concluded that improvement in academic grades could result for those who took a reading course seriously. At the University of Florida, correlations between examination grades in a course based on efficient reading and grades in other subjects have ranged from .47 to .83 for over 15 years, with every correlation except two having been higher than .55 (51: v). While this is not an indication of the direct effect of the reading program upon academic achievement, it was considered as indicative of the increased chances for success in academic work for one who improves his reading ability. Witty (54) pointed out that perhaps improvement in grades in a particular subject should be anticipated only when reading skills necessary for that subjects are emphasized in the reading program. Kingston (25) made a similar suggestion with respect ot increase in recreational reading.

No study found reported involved any direct attempt to check permanency of gains; and only two reports gave stated recognition to the value of checking such (5; 22). Perhaps the studies concerned with effects of reading programs upon academic achievement can be considered indicative of some degree of permanency of gains.

It may be of interest to note that, as far as could be determined, only two of the reading programs discussed in this paper entiled voluntary participation (45; 53). Staton and Maize (45) considered the reading program participants of the Air Command and Staff School to be a highly motivated group because, although commitment to the program was voluntary, once committed, students were not permitted to withdraw. Out of 96 Northwestern University students strongly urged to avail themselves of reading service because of low scores on two reading tests, less than half chose to enroll for the work (53). Comparisons of 180 students comprising the lowest 15 percent on a reading comprehension test, 114 students who had followed the suggestion to take a second reading test, and 42 students who participated in the reading course showed that the last two groups were quite similar to the first group in terms of average scenes and variability on the first reading test. This suggested that putting the second test on a voluntary basis may have resulted in eliminating many students who heeded help greatly. Although enrollment in the reading program at the University of Miami was compulsory for students scoring below a certain point on a reading test, a "substantial number" who were scheduled to take the course failed to register for it; and not all who took it completed it successfully (33). It was suggested that difference in personality characteristics, if any, between those taking the "required" course and those who, although required to take the course, intentionally or unintentionally avoided doing so might be an important unknown factor. It was also suggested that this might be a disturbing factor in voluntary programs.

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EMOTIONAL PROBLEMS IN READING

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The things that I'm going to say to you now are not the results or conclusions of a scientifically controlled study - nor or they hypothesis in a theoretical frame that I am developing. Rather I plan to talk with you about some of my thinking concerning reading as a form of behavior, and how and why some of our own life needs and defenses are acted out in this particular act. Naturally, what I think and say is a result of observations made while working in the reading program at the University, and I'm sure that some of the things I hypothesize and feel now will change in time; some will be modified and part of my present thinking will become more firmly fixed. So you cannot expect to hear a theoretical treatise, rathe (if I were not afraid of digressing) I would just like to talk with you about the college student and his reading. I am sure you all have observed the same things that I have, and have had similar thoughts and question so this will just be a mulling over of our mutual concerns.

I work only with people in college and this is a select group. My observations are made on this group and it is about this group that I think and am talking today. I do not mean specifically to imply that other groups may not be similar - just that I do not know other groups as well.

When we talk about emotional problems in reading, we are not talking about anything unique - anything that goes in a category all by itself. Firstly, reading cannot be regarded as separate and apart from other behavior. In the college student, reading is as much a part of his life as most anything else. He reads to learn, to recreate, to kill time, to compete, to please someone else, to win respect, to escape from reality,-- in fact, he reads for almost the same reasons he does a lot of other things. Reading is just one of his many natural everyday activities. And what is true of our other behavior is true of reading.

We express in our walk much about ourselves. Our eating habits say much about us - our sleeping habits, the way we write, the way we talk, the way we read.

This is our life - our own unique way of living; our needs, defenses, fears, aspirations can all make themselves partly known in many of these everyday activities. All of those things we acquire to adjust to life.

Let us examine a little more closely this particular act of reading--how intimately it is a part of our life--it is us; we read, it is not just reading.

Let us look at how integrated and everydayish reading is in our total lives. As a small child we see others read - our parents. This they can do and we cannot. What do they do with this achievement that we don't have? Share it with us, indicate to us that reading is fun. Do they express annoyance when we want to be read to? Many of our feelings about reading are acquired at this stage.

Then when we begin school we are subject to a whole variety of feelings about reading--the feelings of parents about our reading, our teacher's feelings about it, and our classmates--naturally, we are feeling and reacting, changing and acquiring feelings about our reading too.

We find in school that nearly every subject we study has to be read about. For those courses we don't like, it is a task; for those we do, it is a pleasure. By now books have assumed a subtle "have to" quality. Books are also, or may be, part of our concept of authority--if the book says it, it's right; and as such, our total feelings of authority may cover our feelings toward books.

Reading becomes a way of recreating, a way of satisfying our curiosity; it can be, and frequently is, a sort of substitute fantasy life. Many pre-adolescents and early adolescents read avidly--they are vicariously exploring life through this medium.

Then to college with all the multiplicity of reading requirements and experiences it holds.

So you see, reading is just another facet of our lives, And since it is just another aspect of our lives, we are learning about living and living in our experiences with it. Many of the world's demands can be met only by reading; we must reading to pass our school courses, memorize a poem for an English course, study our Sunday School lesson, study our biology if we want to be a doctor, study hard if we want to do as well as an older brother. Naturally, how we feel about these demands can effect how we read. If we are anxious to please the world, we could become vociferous readers; if we resent the demands, we may resent reading; if we are afraid of the demands, we may be afraid of reading; if we rebel against these demands, we may refust to read. The way we feel about the requirements of our environment may become the way we feel about reading. In fact, we eventually may think we only feel this way about reading and not about the demands at all.

We have learned that not only are many of the world's demands to be met through reading but that some of our demands can also be met through reading. Can we get approved by reading? Is erudition a means of gaining social prestige? Can we dominate through reading attainments? Can we express our resentment by refusing to read? Can books serve as ready-made day dreams to satisfy our needs?

So you see, through this form of behavior known as reading we learn about the demands of our culture, the folks who people it, and about ourselves. When we are reading, *we* are reading.

Now, let us look at some of the attitudes that we sometimes see acted out in reading--some of these feelings that may interfere with reading efficiency, and some of the ways they may manifest themselves.

There is the often-seen word for word reader--many times fears or anxieties are found to be back of his approach to the printed page. As you all know, the word for word reader will soon tell you that he is afraid he will miss something--that is why he reads each word. What is so awful about missing something? Perhaps nothing, if missing something means only that to you--but if one error calls up all your fears of inadequacy, then one error is quite frightening. Let me give you an analogy: Suppose after you go to bed at night you hear a floor board pop. Well, you can understand that it is just a board popping as the house cools off. However, suppose you were reading a particularly exciting murder mystery before you turned out the light--then you hear the floor board pop. After just reading the murder mystery, all of your fears about life, death, and aggression are apt to be a little closer to awareness, and the sound takes on meaning in terms of these feelings and can give you quite a scare. Disproportionate to be sure--taht is if you were just reacting to the cooling house. But you were not, you were reacting to a lot of fears that had momentarily been stirred up. And that is the way some readers react to an error; they are not reacting just to the error but to the threat the error carries with it--fears of total failure, inadequacy and helplessness.

Another possible factor in word for word reading is preoccupation. This is something all of us have experienced. We will be concerned about something, find it difficult to concentrate, and in an effort to force ourselves to attend to the reading matter we will literally read each word. Sometimes it happens that a person is very much involved with a problem--one which he may not be fully aware that he is constantly trying to solve. But as a result he has to force himself to attend to each word. It is as though his attention span is only one word long.

Another possible reading difficulty that could result from preoccupation could be the inability to attend to details in reading. The person may complain that he can get the main idea but that he can't make himself get all the details. He may even argue that details are unnecessary. Usually these people are spending most of their mental energy in the solution or the repression of some emotional problems and have very little energy left with which to cope with details.

Then there are people who are afraid to try to understand--to try and to fail would mean to be a failure. Better not to try and to continue believing that if he did try, he could get it.

Sometimes helplessness is his bid for love, or for attention. Only by needing help can he get attention, and thereby assurance of his worth. Or helplessness can be a way of dominating others. He has found that when he cannot do for himself people stop what they are doing and try to help him. Let me cite a case in which a young man used his general inadequacy and his inability to understand and retain what he read as a means of getting reassurance and also as a means of retaliation.

This young man came to the Bureau seeking assistance in his reading skills. He seemed principally concerned about the fact that he was failing in his courses. He manifested much concern over this and asserted his willingness and eagerness to do anything that would help. On the reading tests we administered, he did not preform as well as most students do, and on an intelligence test he rated fairly low when compared to college people. He began coming to the group meetings and instead of getting better, he appeared to do worse. This upset him quite a bit; he came often to talk to the people in the program about it. It was then arranged for this boy to dot individual help with his reading, but no one ever was able to really get through to the young man. He was so busy telling us how poorly he was doing--how he didn't seem to be improving. Actually he was too busy insisting on his own failures to do much about them. Further conferences with him revealed that his family had rather high expectations of him, and when he failed to live up to these, his father began to berate him. This young man felt, and had felt for quite a while, that he was a failure and very much misunderstood. The boy was quite hurt by the father's attitude. How could he in turn hurt the father? By being just what was causing the father so much concern--a failure. And so the young man was confronting the father with what he felt the father deserved.

This is greatly oversimplified and many aspects of this case were omitted, but I wanted you to see one way this boy was using poor comprehension skills.

Well, I could go on for quite a time if I were to try to list all of the attitudes that might play a part in determining how we read and how they might manifest themselves. It is particularly complex, too, since the same reading problem might mean something entirely different to each of two people manifesting it.

Since reading can, and does, mean so much to each of the persons coming to our reading clinics, what can we do to help insure that his experience in the program might be a therapeutic one, without going therapy? Well, essentially, I guess, just what most of are already trying to do. We try to provide a place where the minimum of pressure to do right, to pass, to succeed, is expected--where the optimum of reassurance, encouragement and understanding are extended to the student--and to give the student a new and stimulating experience with reading. In many instances, a reading program serves only to recondition a person-that is, to associate pleasure with reading rather than fear or discomfort.

TESTS AND TESTING

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A survey was conducted for the purpose of discovering which reading tests are in use in the colleges and universities in the area of the Southwest Reading Conference. Twelve institutions replied to the inquiry. The following tests were reported to be in use. The number in parenthesis gives the number of institutions using the test.

Bett's Informal Spelling Inventory (1)
California Aptitude (1)
California Short Test of Mental Ability (1)
California Reading Test (1)
Cooperative English Test (3)
Diagnostic Reading Tests (8)
Dolch Basic Vocabulary (1)
Gray's Oral Reading Test (2)
Iowa Silent Reading Test (7)
Metropolitan Achievement (1)
Nelson-Denny (1)
Ohio Psychological (1)
Stanford Achievement (1)
Tyler-Kembler Study Skills (1)
Weschler-Bellevue (1)
Wren's Checklist of Study Habits (1)

Several institutions reported use of their own tests that had not been standardized.

A STUDY OF STUDENT LOSS IN RELATION TO READING SCORES AT HARDIN-SIMMONS UNIVERSITY

This part of this paper is designed simply to illustrate the fact that the data already collected by the teacher of reading often can be used to shed light on problems which concern the whole school. The particular investigated is the retention for the other three years of their school of students who come to Hardin-Simmons as freshmen. To keep those students who adventure within the walls of an academic institution is a worthwhile aim for any school, but it is particularly important for a private college without heavy endowment, and Hardin-Simmons has become interested in increasing its total enrollment through retaining more of its first year, freshman students. This paper attempts to give some information to the subject by examining the records of a majority of the students in two freshman classes, those of 1951 and 1952.

The data used for the study was already at hand, and it is the sort of information available in most schools. The reading test used is the one given to entering freshmen at H-S. U. It is a simple instrument, an adaptation of a Reader's Digest test. The material to be read is exposition, about 3,000 words in length. Students were asked to mark the place to which they had read at the end of two minutes, and rate scores were figured from this information. Additional time was given for completing the reading of the essay, and twenty multiple-choice questions were asked; a comprehension score was found from the answers to these questions. The test is an inexact measure of reading ability, but it gives relative information about the entering students and it helps in advising retarded readers about the necessity of improving their ability.

The two other pieces of information used were secured from the student's records in the registrar's office. The grades made by the student in his freshman year, and the fact of whether or not he enrolled as a sophomore at H-S. U. were secured; his enrollment for later years wer ignored because it had been determined previously that the greatest student loss was between the freshman and sophomore years. Each freshman class was divided into three groups, those who returned as sophomores, those who dropped out of school during the freshman year, and those who finished the freshman year but who did not return as sophomores. No attempt was made to ascertain whether students who dropped school at Hardin-Simmons went to another college.

The accomplishment level for each student who made grades in any of his courses was ascertained through the grade-point constants in use at the University. An A gives plus 3 grade points for each hour of credit, a B is plus 2, a C is plus 1, a D is 0, and an F is minus 1. Students who withdrew from a course with a passing grade (WP) receive no credit in a course, but, for the of this computation, a student who withdrew with a failing record (WF) was recorded as an F. It will be obvious that this system of summarizing records makes the apparent average of a student higher than it actually is; there is greater weight average on passing marks than on failing ones. Courses in music and military science were figured in the accomplishment level, but courses in physical education were not because of a lack of coordination between PE grades and other grades made, and because of the lack of relevance of a reading score in a physical education course of study. Students in the accompanying charts, who are recorded under the heading "Others" are those who, for some reason, did not have a record in the registrar's office, although they took the freshman test.

The first fact that may be observed in the tables resulting from the study can be seen in the accompanying chart--"Distribution--Reading Percentiles." (See table, page 52.)

It will be observed that there is no positive correlation between low reading scores and staying in school; as many students were lost from the fourth quartile as from the first. The same general situation may be noted in relation to scores in both rate and comprehension. The greatest number and percentage of students who fail to become sophomores at H-S. U. are in the second and third quartiles; more of the best and worst students remain. A substantiating fact may be observed in the accompanying chart--"Grade-Reading Percentile". (See table, page 54-55.)

Although there is a degree of correlation between reading scores and grades, the correspondence is not high. Although more A students were in the fourth and third quartiles in reading, the distribution of grades within each grouping is wide. It is apparent, however, that the correlation between rate and grades in generally a little higher than that between comprehension and grades; it would not be safe to predict the success of a student in his H-S. U. grades from his reading scores; evidently other factors are at least as important as reading ability.

Neither is the correlation high between the grades made by the freshmen at H-S. U. and whether he stayed at the school. As might be expected, and as is indicated in the tabulation "Grade Distribution in Relation to Return for Sophomore Year," more students with A records remain at the University than any other group. As will be noted in the summary of the facts in this table, the higher the grade, the more likely the student is to remain at school, but a substantial number

DISTRIBUTION-READING PERCENTILES

RATE

	Kept	Lost			Total
		In Year	End Year	Total	
1951					
1/4	49	18	12	27	76
2/4	41	62	32	38	79
3/4	48	14	31	45	93
4/4	49	30	27	27	73
Total	187	47	90	137	324
1952					
1/4	47	17	23	40	87
2/4	35	20	30	50	85
3/4	34	18	20	38	72
4/4	54	12	20	32	86
Oth.	4		7	7	11
Total	174	67	100	167	341
Totals					
1/4	36	34	33	67	163
2/4	76	26	62	88	164
3/4	82	32	51	83	165
4/4	103	22	37	59	159
Oth.	4		7	7	11
Totals	361	114	190	304	665

COMPREHENSION

	Kept	Lost			Total
		In Year	End Year	Total	
1951					
1/4	49	16	13	30	79
2/4	41	14	25	39	80
3/4	48	9	29	38	86
4/4	49	7	23	30	79
Total	187			137	
1952					
1/4	46	23	18	41	87
2/4	22	8	20	28	50
3/4	62	18	40	58	120
4/4	40	18	15	33	73
Oth.	5		7	7	11
Total	174	67	100	167	341
Totals					
1/4	35	40	31	71	175
2/4	63	22	45	67	130
3/4	110	27	69	96	206
4/4	89	25	38	63	152
Oth.	4		7	7	11
Total	361	114	190	304	665

of students are lost at every level: however the loss-percentage of A, B, and C students is less than the average loss in the freshman class.

The students lost, in reference to the percentile range of reading scores substantiates the observation previously noted--the best and worst students are likely to remain at school and the two middle quartiles furnish the largest number of losses in the student body.

It is therefore apparent that Hardin-Simmons does its best job in challenging its best prospects and in nursing its weakest students; its greatest opportunity is in offering increased challenge to the average students who start to the school but who are not sufficiently interested to remain there.

Perhaps one reason for a lack of challenge to the average student is to be seen, symptomatically, in the "Grade Distribution" tabulation.

The proportions of each letter grade given show that the marks are skewed rather abruptly toward the top, particularly in the B. bracket. The number of A grades given is near an average distribution, but the number of B's is considerably higher than common. One result of such a system might well be to make the reward of a class mark so easy that it does not offer the intellectual stimulation desired by the student.

Certainly this study has not been classic, nor are the results those that a teacher of reading might desire. No sharp relationship between the ability to lead and either success at Hardin-Simmons or a desire to stay in school there has been discovered. The chief factor which may be seen is that the greatest student loss comes in the average student who needs to be given greater scholastic incentive, but there is an observable relationship between poor ability to read and poor marks in college. I make no suggestion that the remedial reading course is a solution to the problem of keeping students satisfied in their first school, but I will report that, of 27 freshmen enrolled in remedial reading from this class of 1951, 22 are still at Hardin-Simmons. Since the course is a completely voluntary one, student "drive" contributes to the situation, but the fact is interesting.

GRADE-READING DISTRIBUTION--FRESHMAN STUDENTS, HARDIN-SIMMONS UNIVERSITY

	1951						1952			
Grade	1/4	2/4	3/4	4/4	Grade		1/4	2/4	3/4	4/4
	Students Returning for the Sophomore Year									
A 21	R 2	3	12	4	A 20	R	1	3	5	11
	C-	8	9	4		C	-	-	13	7
B 62	R 11	17	11	23	B 67	R	15	14	16	22
	C 8	27	7	20		C	13	6	25	23
C 84	R 27	17	21	19	C 67	R	21	17	12	17
	C 23	32	14	15		C	24	13	20	10
D 16	R 6	3	4	3	D 15	R	4	1	1	4
	C 6	5	3	2		C	8	3	3	1
F 2	R 1	1	-	-	F 1	R	1	-	-	-
	C 1	1	-	-		C	1	-	-	-
Oth. 2	Students Dropping During Freshman Year									Oth. 7
A 2	R 1	-	-	1	A 1	R	-	1	-	-
	C 1	-	1	-		C	1	-	-	-

B	11	R 4	1	5	1	B	12	R 1	1	6	4
		C 2	5	3	1			C 2	2	5	3
C	8	R 2	2	2	2	C	16	R 5	7	3	1
		C 2	1	4	1			C 5	3	3	5
D	7	R 2	-	3	2	D	48	R 5	1	1	1
		C 3	3	1	-			C 4	-	1	3
F	9	R 4	1	2	2	F	14	R 2	6	4	2
		C 7	1	-	1			C 6	-	4	4
WP	10	R 4	2	2	2	WP	16	R 4	5	3	4
		C 6	4	4	4			C 6	3	4	3

Students not Returning

A	6	R -	2	3	1	A	4	R 1	2	2	1
		C -	2	2	2			C -	1	1	2
B	30	R 3	10	13	4	B	29	R 4	11	8	6
		C 4	12	7	7			C 7	3	12	7
C	27	R 3	9	9	6	C	35	R 12	11	6	6
		C 7	7	8	5			C 7	11	16	1
D	19	R 2	7	4	6	D	16	R 5	4	4	3
		C 2	2	9	6			C 3	3	8	2
F	4	R -	2	1	-	F	9	R 2	3	-	4
		C 1	2	1	-			C 1	2	3n	3
Oth.	4	R 1	2	1	-	Oth.	7				

INFORMAL METHODS OF APPRAISAL

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School reading programs recently have become broader and more flexible because of variance in materials and purposes of reading and the objectives of instruction. It is logical to assume that those factors have influenced greatly the complexity of diagnosing reading ability. The development of standardized measures has not been able to keep pace with the need for appraising achievement in the broader aspects of reading instruction.(13)

Carter & McGinnis (3) define reading disability as inability to learn to read when taught by ordinary classroom procedures. This deficiency is observable in the student's whole environment and may affect his educational, social, and emotional adjustment. No student should be classed as a case of reading disability solely on evidence presented by reading-test scores. Such testing would constitute only a fraction of the evaluation. All factors in the case should be given consideration. Evaluation of reading includes not only the use of formal or standardized measures but also the use of information gathered by informal methods which permit the teacher to adapt the testing to the particular needs and abilities of the students.

What are some of the more common informal techniques of appraising reading ability? Most authorities in the field of reading agree that teachers are able to estimate informally the student needs through 1) observation, casual conversation, and analysis of their work, 2) case histories or records, and 3) informal tests. The teacher, by observing the individual student in a classroom situation, talking with him, and studying his written examinations or compostions is capable of discerning certain manifestations of reading disability. The teacher is able to find out considerable information about his reading ability, interests, and need for reading. When the student reads orally, the teacher can immediately detect mispronunciation, substitutions, insertions, omissions, additions, repetitions, and reversal of letters, syllables, words, and phrases (8). It is possible to note manifestations of emotional and personality deviation, inability to do satisfactory academic work, rate of reading, and to secure a check of comprehension in terms of summaries or questions over the material he has read.

Diagnosis from observation begins with the student's appearance at the first conference and should continue throughout his course in remedial reading. Some clues which may aid the instructor in perceiving what is wrong with the student's reading process are presented by Triggs (11):

1) Articulation--observation of the student reading silently will show presence of lip movement indicating articulation of all or part of each word he reads, forcing undue attention to each word. A comparison of oral and silent reading rates is also an aid to detection of articulation as well as the student's reading habits.
2) Head movement--unnecessary head movement hinders accurate perception and decreases rate of reading.
3) Eye movements--usually a symptom, not a cause, of poor reading. They are the result of other disabilities, faulty comprehension, or limited vocabulary and are best attacked by improving general reading skills. If a student's other reading disabilities are corrected, eye movements will probably take care of themselves.
4) Use of mechanical aids--the tendency to point with a finger or pencil is a good indication something is wrong.
5) Work or study habits--since study skills and reading skills are closely related. It is sometimes difficult to distinguish between them. Note how thoroughly the student seems to concentrate, how well he handles exercises, how much time he requires to complete certain tasks, and how well he follows directions. All these factors are important in diagnosis and remedial treatment. Does the student do as little as possible, or is he a hard worker? It is advisable to correct poor study techniques before attempting any type of Remedial work.

Case history is another method which is valuable in diagnosis of reading problems which are so complex that the students would be more able to gain a realistic understanding of their problems and be more likely to assume responsibility for overcoming their disabilities if they were handled in individual conferences. The way in which the student is referred to the reading clinic or to the reading specialist largely determines the success of therapy. Securing a history of the student's academic achievements, interests, and family background should be a part of the diagnostic process, for it often aids in choosing the best remedial approach. Triggs (11) feels that a good case history should include:

1) A measure of scholastic aptitude and perhaps results of intelligence tests.
2) Past high school record--grades, subjects, and teachers, etc.--which would disclose physical illnesses, changes of school, absences, and the type of work he has done in courses requiring a great deal of reading.
3) Special abilities and vocational interests, which may provide motivation to develop necessary reading skills for his chosen profession.
4) Health history, which may reveal important deviations in the areas of hearing, eyesight, and speech.
5) Both objective and subjective estimates of personality, which at best can only indicate general areas of maladjustment and are unreliable in the hands of untrained personnel.
6) Educational and Socio-ecomonic status of the family.
7) Extra-curricular activities, which will enable the clinician to select reading material of interest to the student and also aids in establishing rapport.

Information of the above nature may be gathered from the student's cumulative record, conferences with the student, parents and teachers of the student. It is wise to work out some procedure for recording the data. If there is no definite system and place for recording the information, it may become lost or destroyed and all the work will have been in vain. Compilation of the case history should continue throughout the remedial program. This information will also be valuable later as part of the student's permanent record or in research.

A third method of appraisal is by tests. The standardized test has definite advantages in at least three areas: 1) determination of the range of reading ability in class groupings, 2) determination of the range of achievement in certain phases of reading, such as word recognition, comprehension, and vocabulary, 3) in measuring the amount of gain resulting from instruction. Such tests indicate little concerning detailed reading abilities and should not be relied on as a complete guide for directing instruction, especially for individual students (5). Traxler (10) made a critical survey of 28 silent reading tests which could be used as diagnostic measures. If a test yielded three or more separate scores, it was considered diagnostic in nature. Forty-nine (49) types of reading ability were tested with the 28 tests which he judged fairly reliable, valid instruments. He stated that the diagnostician is more important than the test and that no one test thoroughly measures all kinds of reading ability.

How then will you attempt to diagnose these detailed reading abilities which cannot be measured by standardized tests? Durrell (5) points out that the following areas can be satisfactorily measured by informal tests:

1) Reading interest and attitude and the amount of voluntary outside reading.
2) Word skills employed in silent reading.
3) Study skills, detailed reading, skimming, associational skills, use of the dictionary, and parts of a book.
4) Suitability as to the reading difficulty of the materials used in classroom instruction.

The following reading skills are measured by informal or non-standardized tests:

1) Word analysis
2) Oral reading
3) Oral recall (aided or unaided by questions)
4) Written recall (aided or unaided by questions)
5) Speed of reading
6) Vocabulary
7) Critical reading
8) Study and library usage skills

Proper use of informal tests, supplemented by observation, will yield for the competent teacher information of sufficient diagnostic nature to be useful in meeting the individual needs.

The resourceful teacher who utilizes all of the informal techniques of appraisal--observations, case histories or studies, and informal tests--will be doing a great deal in meeting and overcoming the needs of the student.

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CHECKING COLLEGE STUDENTS' VISION

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It is a difficult task for the college professor, a layman insofar as vision is concerned, to make a satisfactory examination of a college student's vision as a screening examination. The law does not permit a layman to make a diagnosis! Furthermore, the commercial tests designed for a teacher to use in making a screening examination produce data which are usually not understandable to the eye specialist, and also fail to recognize the usual toleration limits established by eye specialists. Hence, the problems involved in making a screening examination of a college student's vision status for referral to an eye specialist is one that deserves our best brand of thinking.

Absolute Values

A screening examination conducted by a layman should be directed toward obtaining absolute values for the college student's vision status when referred to an eye specialist. The absolute values are (1) visual acuity status (reduction of vision in one or both eyes), (2) available focussing power of both eyes (amplitude of accommodation), (3) astigmatic status, (4) binocular status (muscle balance status), (5) anemic status, (6) scotoma status, and (7) normal, far, or nearsightedness status.

The Layman's Examination of the College Student's Vision Status

Eye specialists are in agreement as to the best target to use in determining visual acuity or sharpness of vision, namely, the illiterate - E target. Optical companies have illiterate - E test charts for sale. A mask should be used as the mask prevents memorization of the position of the E - symbol. The opening in the mask should be large enough to accommodate the largest E - target used. Cut the large chart containing the E targets for 20 feet, 30 feet, 40 feet and 50 feet in strips; each strip contains the E - targets for a specified distance such as 20 feet, 30 feet, 40 feet, etc. The strip must be the same width. The E - targets for 20 feet and 30 feet must appear near the top of the strip in order that they may be seen by the case as the examiner lets the strip rest on the batten which is fastened just below the opening in the mask and permits the examiner to slide an E - target strip flat on the batten until he has the desired E - target immediately back of the opening in the mask. The case states or points so as to indicate the direction in which the legs of the illiterate E - symbol are pointing.

An inexpensive trial-frame is a must in making the examination. An excellent mirror approximately twelve inches square will make it unnecessary for the examiner to have a helper. The mirror should be fastened to a T-shaped wooden stand approximately forty-two inches high. The T-shaped wooden stand approximately forty-two inches high. The T-shaped stand with mirror are placed ten feet in front of the mask permitting the hole in the mask to appear approximately in the center of the mirror. You are now ready to examine the cases's vision status.

Visual Acuity Status

Show case the E's on the 50-foot strip asking case to tell or point so as to indicate the direction in which the legs of the 50-foot E-target point. Be sure that he understands exactly what you are expecting him to do. You are now ready to adjust trial-frame to case's eyes; occlude case's left eye while you test his right eye for visual acuity status. Use a goose-neck desk lamp with a bulb with the watt-power designated on the Illiterate - E Test Card. Turn on the light in the goose-neck desk lamp.

The examiner should begin the test by using the 20-foot E-target strip. If case's responses are 100% accurate on the 20-foot E-target, he has 20/20 visual acuity in his right eye. Occlude case's right eye and check his left eye in the same manner as you checked his right eye. If case's responses are 100% accurate, he has 20/20 visual acuity in the left eye.

Available-focusing Power

The examiner should occlude case's left eye. Use the 20-foot E-target strip and place a plus0.50 diopter lens before right eye, asking case to tell you which way the legs of the E point; use only three E-targets. If case's responses are correct, place a pluso.75 diopter lens before his right eye; use only three E-targets. If case's responses are correct, place a plus 1.00 diopter lens before his right eye; use only three E-targets. If cases responses are correct, place a plus1.25 diopter lens before his right eye; use three or more E-targets. If case's responses are correct, place a plus1.50 diopter lens before his right eye; use three or more targets. If case's responses are all incorrect, his available focussing power is plus1.25 diopters which is excellent. If case's available focussing power is plus1.50, or plus1.75, or plus2.00 diopters the examiner has a right to anticipate that the case's eyes are far-sighted.

Astigmatic Status

If case's available focussing power is pluso.75 diopters or less, the examiner should use Placido's Keratoscope with a plus15.00 diopter lens over the right eye; place goose-neck desk lamp back of case's right shoulder when making this test; distortion of the corneal reflection of the circles indicates an abnormality of curvature or astigmatism. Examiner is safe in asking student to go to an eye specialist and be checked for astigmatism. Check left eye in like manner; place lamp back of case's left shoulder.

The Keratoscope is useful only when the cornea has an irregular curvature; if the crystalline lens has an irregular curvature, the Keratoscope will not enable the examiner to detect this condition. The examiner may find a retinoscope to be useful in detecting an irregular curvature of the crystalline lens in each eye.

Binocular Status (muscle balance)

There are several types of deviations which can be corrected by muscular effort, e.g., (1) orthophoria is a condition known as perfect muscle balance; (2) exophoria is a tendency for the eyes to deviate outward; (3) esophoria is a tendency for the eyes to deviate inward; (4) hyperphoria is a tendency for one eye to deviate upword. Heterphoria is the name used to designate all the types of imperfect muscle balance.

In checking the student's binocular status the examiner places a Maddox Multiple-rod lens in the trial frame and over the right eye; turn the lens handle to a horizontal position. Take a two-cell flashlight that has had a piece of black cardboard placed in front of the bulb; with a paper punch make a small hole in the circular piece of black cardboard before you insert it. When the flashlight is turned on, a small, round light the diameter of the hole in motebook paper can be seen. The examiner asks, "Do you see the red line above, through, or below the white light?" The case's reply may be any one of three responses; (1) the red line runs through the light (orthophoria), (2) the red line is above the light (left hyperphoria), and (3) the red line is below the light (right hyperphoria). Only the first response listed above indicates that there is no hyperphoria or latent deviation of the eyes vertically. Prism lenses are used over the left eye to measure the amount of imbalance.

The examiner turns the handle on the Maddox Multiple rod lens to a vertical position and again holds the flashlight about 13 inches from case's nose. This time as indicated by the handle on the Maddox Multiple-rod lens the red line will be in a vertical position. The examiner says, "Do you see the red line to the right of the white light, through the white light, or to the left of the white light?" Case may respond in one of the three ways as follows: (1) to the right of the white light (esophoria); (2) through the white light (orthophoria); or (3) to the left of the white light (exophoria). Prism lenses are used over the left eye to measure the amount of muscle imbalance. At near point 2° to 4° prism diopters of exphoria is considered to be only a slight amount of muscle imbalance.

Remember we see with the fovea in the back of each eye. This is significant, to keep in mind, when checking students for heterophoria.

Anemic Status

The Feldman Adoptometer is used in measuring the student's anemic status. The Feldman Adoptometer is easy to operate and should be used by the teacher as a screening test for secondary anemias as evidenced by a Vitamin A deficiency. It is sold by the American Optical Company, and in 1945, it cost seventy-five dollars.

Scotoma

The eye specialist should make the examination of the student's eyes for evidence of scotoma. It can be done by an ambitious and energetic college professor if he uses a good perimeter.

Materials Needed for Checking Vision

I. Visual Acuity, and Farsightedness	COST
A. Mask out of Cardboard box	$00.00
B. Illiterate-E test Card	.50
C. One +1.75 diopter lens for farsightedness	1.00

D. Goose-Neck Desk Lamp	2.50	
E. Mirror	4.00	
TOTAL	$ 8.00	$ 8.00
II. Eye-Muscle Imbalance Tests		
A. Maddox Multiple-Rod Test Lens	$ 5.50	
B. Flashlight	1.50	
C. Prism Lenses: 0.50, 1,2,3,4,6,8	14.00	
TOTAL	$21.00	$ 29.00
III. Available-Focusing-Power Test		
A. Moorfield Trial Frame	$19.50	
B. Plus Lenses: 0.25,0.50,0.75,1.00, 1.25,1.50	6.00	
TOTAL	$25.50	$ 54.50
IV. Wooden Mask	$ 4.50	$ 59.00
V. Retinoscopic Technique		
A. Retinoscope	$27.50	
B. Extra Plus Lenses: 3,4,5,6	5.00	
C. Extra -Lenses: -¼,-½,-1,-2,-3,-4, -5,-6	8.00	
TOTAL	$40.50	$ 99.50
VI. Schematic Eye	$10.00	$109.50
VII. Eames Eye Kit & Stereoscope	$ 8.00	$117.50

Far and Near Vision Values

Hypermetropia under 3 diopters is called, low; between 3 and 4 diopters, moderate; and over 4 diopters, is called high. Myopia under 3 diopters, is called low; between 3 and 6 diopters, moderate; and over 6 diopters, high. Cowan, 168; 1945.

The Meaning of The Phorias

Orthophoria--The case has perfect eye-muscle balance. Heterophoria--Imperfect eye-muscle imbalance; includes all types. Exophoria--a tendency for the posterior part of each eye to deviate outward. Esophoria--A tendency of the posterior part of each eyeball to deviate inward. Hyperphoria--A tendency for the posterior part of one eye to deviate upward. Cyclophoria--A tendency for the vertical meridian of the posterior part of one eye to deviate from the vertical position. Exophoria or Esophoria (far point) of 1 degree to 2 degree is normal; Exophoria to 4 degrees is a slight amount.

SUMMARY

In my opinion there are three things that are wrong with the commercial tests on the market for teachers to use in screening vision. First, they cost too much. Second, they are not accurate enough. Third, they use a language that the eye specialist is usually not familiar with.

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ANALYSIS OF READING QUESTIONNAIRE FOR TEXAS SOCIETY FOR COLLEGE TEACHERS OF EDUCATION

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The following analysis is based upon the 44 questionnaires returned in the spring of 1953 to Oscar S. Causey, Texas Christian University. Of this total, 29 were received from four year colleges and 15 from junior colleges.

I. In response to the question: Does your institution offer courses in reading methods, remedial reading, clinical procedures and/or other similar courses to prepare teachers to teach reading in public schools?

Fourteen junior colleges responded negatively and only one, Howard County Junior College, listed courses in the teaching of reading.

Twenty-seven senior colleges indicated that they offered two or more preparatory courses. Two senior colleges, Lamar Tech and the University of St. Thomas, do not offer work in this area.

Due to the diversity of course offerings no attempt was made in this initial tally to classify the courses as to objectives and scope. It was significant, however, that most of the courses are directed toward elementary school teaching and only four schools reported special courses which deal with High School reading *per se*. Many institutions regarded their reading courses as serving a dual purpose, satisfying both high school and elementary school needs.

II. In response to the question: Is provision made for the college students in these classes to identify and study reading problems by observing or teaching elementary or high school boys and girls?

Twenty-two of the twenty-seven institutions offering courses in reading make provisions for their students to observe or to teach elementary or high school children in the classrooms. (It is not clear whether this provision is in addition to the normal practice teaching requirements). Five schools didn't report.

Nineteen schools reported the use of a case method procedure for training prospective teachers.

Of the twelve colleges which operate reading laboratories or clinics, eight of them provide some opportunity for prospective teachers to observe and study elementary or high school children in these situations.

III. As previously mentioned only twelve of the reporting four year colleges operate reading laboratories or clinics. Thus fifteen of the reporting senior institutions do not furnish this service. None of the junior colleges reported operating a clinic.

It is interesting to note the diversity in responsible departments among colleges which do operate reading programs. These are tallied below.

Department	No. of Institutions
(a) Guidance Services	2
(b) Department of Education	5
(c) Department of Psychology	1
(d) Department of English	1
Those with dual responsibility	
Education and Psychology Departments	1
Educational Psychology and English Departments	1
Education and English	1
TOTAL	12

IV. Only fourteen institutions report the use of standardized tests to discover the reading ability of prosepctive teachers. Two other institutions report that they use standardized tests with selected groups of students i. e. those who enroll in specific courses. Only three schools report the use of teacher made tests.

V. Eleven colleges offer a course designed specifically to improve the reading ability of their students. Five institutions grant credit and six do not give credit for this course.

VI. In response to the question: Has your institution made a study to determine the amount of reading done by prospective students beyond textbook assignments? Three institutions indicated that they had done informal studies. These institutions are Texas Southmost College, East Texas Baptist College, and Austin College. None had the results available.

VII. Questions submitted:

1. What methods can be used to improve the reading comptency of prospective teachers if clinics or special courses are not available?
2. Can all departments of an institution in which prospective teachers enroll for courses be made aware of their responsibilities toward improving the reading ability of the students? If so, how?
3. What percentage of prospective teachers take an active interest in reading current events? Can this be improved? How
4. What steps are colleges taking to improve the language handicaps of Spanish speaking students? How is teacher preparation being directed toward this end?
5. What is the place of the reading program in today's school?
6. Should reading be taught as a part of a language arts course?
7. What should be the role of television and other audio-visual techniques in teacher preparation?
8. Should the teacher begin with a planned reading program or should she start with a knowledge of her children?
9. By what methods can one prevent reading difficulties?
10. What is the place of phonetics in the reading program?
11. To what extent should the teacher of any subject area be equipped to teach the proper methods of reading that particular area?
12. What specific preparation in reading does the elementary teacher need?
13. How can we get more administrators to enroll in courses or workshops which relate to reading?
14. What kind of in-service training would be most beneficial to teachers of reading?

VIII. Other topics in which interest was expressed related to the administration of reading programs or clinics for college students. Questions in this area included the cost of a program, who should be responsible for it, should credit be offered.

A PROGRAM AT NORTHEASTERN STATE COLLEGE, (OKLAHOMA)

Ernest A. Jones
Northeastern State College

The Reading Laboratory at Northeastern State College began operation in September, 1952. The laboratory is housed in the Education Building in rooms 15 and 17. The physical facilities consist of a reception room, five cubicles for diagnosing and remedial instruction, director's office, projection room, and reading room. The program includes developmental reading courses for college students, offering them complete reading diagnosis and developmental training in basic reading fundamentals, to include spelling, tachistoscopic training, metroniscopic film training, accelerator training and other devices, and work books designed to improve reading efficiency. A reading methods course is offered in the Department of Education and is taught by the director of the Reading Laboratory. Students enrolling in these courses receive two hours of lecture and discussion and three hours of laboratory work.

The laboratory work consists of individual or small group instruction of elementary and high school students who are retarded in reading. These elementary students are primarily local students. Reading diagnosis is offered to persons of any age throughout the Northeastern State College district and remedial techniques advised. During summer terms public school children of all ages do resident work for nine weeks in conjunction with the regular summer school held in the college training school. At this time in-service teachers taking graduate work in either special problems in reading or clinical practices in reading do laboratory work with these pupils.

Adult courses are offered throughout the Northeastern State College district. The current one has an enrollment of eighteen. During the spring semester an adult class will be held. Additional services available at the Reading Laboratory, as isolated tests, include intelligence tests, achievement tests, spelling, visual acuity, audiometer, opthalmograph, readiness, voice recording and play back, and phonetic inventory. The Reading Laboratory is under the direction of Dr. Ernest A. Jones.

READING IMPROVEMENT IN INDUSTRY

D.D. Hunt
Humble Oil Co., Houston, Texas

What is this business of "speed reading?" Much has been written about it in recent years; many claims, some almost fantastic, have been made for the results of relatively short periods of training. They are really not unmindful of the age-old appeal; "Be the life of the party--learn to play the piano in ten easy lessons."

The "average executive" has been told very bluntly that he does not know how to read, that his reading, generally, is equivalent to that of a seventh-grade schoolboy. Honestly, this has been presented as "fact," substantiated by tests of more than a thousand executives. These men were tested either in special university clinics or by professional reading consultants.

They have been told that after only 15 to 20 hours of "reading training," they may expect to find their reading speed doubled and comprehension of what they read increased. Even the seventh-grade schoolboy would go for a proposition like that!

Preliminary Work

Anything that holds the faintest ray of hope for making the job of the industrial manager a bit easier is generally worth a trial. It may have been just some such feeling as this that led some of our executives to ask the question: What is this business of speed reading? To get an answer to that question, a very careful but not too conclusive investigation was made of what was actually being done in reading training in this area. It was not too conclusive because at that time nowhere in the Southwest could we find where a reading course had been conducted in industry. However, we recommended to management that an experimental course, in which they would serve as "guinea pigs," be conducted by a professional reading instructor. Management agreed and a 20-hour course was conducted on Company time in the general offices in Houston by Dr. Selma E. Herr of Tulane University. The results of this course were sufficiently encouraging to prompt management to approve the course on a continuing basis to be conducted by members of the Training Division.

Problems Peculiar to Industry

The experimental course showed that some changes were necessary to adapt it to industrial needs. One of the biggest problems in conducting a reading improvement course in industry lies in tailoring it to fit the circumstances peculiar to industry. Thus far, "students" have been from upper management levels. They are executives who, for the most part, are already overloaded with responsibilities. Today's problems always look bigger than tomorrow's; there is little time for anything but current activities. This makes it difficult for them to meet with any great degree of regularity or at specific times. Therefore, sustained attendance consitutes one problem.

The duration of the course, the frequency and length of meetings are necessarily limited. The scope of the course must be given careful consideration. Even in small groups there is a wide divergence in such characteristics as age, formal education, background, and experience. From a practical point of view, it is impossible to spend much time on such essential elements of reading improvement as vocabulary development and concentration exercises. Most of the training in those phases is incidental to other aspects of the course. This course was organized and presented with a consideration of these and other circumstances.

Organization of Course

Each class is limited to 12 members or "students". They meet during regular work hours at a frequency of twice each week for a period of 10 weeks. Each meeting is $1\frac{1}{2}$ hours in length. The first meeting of each class is devoted entirely to a test to determine the beginning reading rate and comprehension of each member. Diagnostic, Survey Section tests are used through out the course. The second meeting is spent in orientation. An explanation is given of just how the course will be conducted. Each piece of equipment used in the course is demonstrated and its purposes explained. At this point, an explanation of the mechanical aspects of the reading process is given the group and the premise is established that we proceed on the basis of correcting certain mechanical faults. To supplement this explanation, a 10-minute motion picture film entitled "Speeding Your Reading" is shown.

Two Phases of the Course

With the exception of the 11th meeting, which marks the mid-way point of the course, and the 20th, or last meeting, of each course, all of the others follow the same pattern. This, then, divides the course into two phases: four meetings for orientation and testing and 16 meetings for the actual training. Beginning with the third meeting, the lcass is divided into two sections of six "students" each.

The training is also divided into two parts, group and individual work. While one section is given the group training, the other is given individual training in another room. The duration of each part is 40 minutes. There is a 10-minute coffee break between sessions which gives time for relaxation and change of classroom. The group training includes 15 minutes on tachistoscopic exercises, 10 minutes on written perceptual training exercises, and 15 minutes exercise on reading films projected by the Speed-Reader.

That half of each training period given to individual work includes 25 minutes of practice reading on the Reading Accelerator. Practice reading material is taken from the Reader's Digest, Coronet, and selected novels. During the last 15 minutes of each of these periods, a reading test from SRA Better Reading Book 3 is given. These are taken alternately, paced by the Reading Accelerator and unpaced. By these tests, daily progress of each individual is indicated. Progress is also determined and compared with that shown by the reading book tests, by other Diagnostic, Survey Section tests given at the mid-way point of the course and at the end.

Results of the Course

In brief, our "students" found at the end of a 30-hour course, they read 86% faster than they did at the beginning and, at the same time, their comprehension of what they read increased 17%. Five months after they had completed the course, they found that they retained 50% of their gain in reading speed and 51.5% of their increase in comprehension. It will be interesting to see what this retention looks like one year after these people finished the course.

The table on page 76 shows the individual progress attained through the course and the retention of progress five months after completion for 18 of the 24 members enrolled in two different classes since the experimental course. The other six members of these groups were unavailable for the retention tests.

Now, if we could define "reading," we might be able to tell whether this is good or bad. We would at least be able to tell if the tests on speed and comprehension have any validity with respect to a person's real ability to read and comprehend. But, at the present, we know of no better means for determining progress so we use this means as a yardstick until some better device is suggested. Possibly the best indication of success is the unanimous feeling among "students" that the course helped them a great deal.

We are particularly indebted to Dr. A. J. Kingston of Texas Agricultural and Mechanical College and to Mr. Oscar S. Causey of Texas Christian University for their advice and counsel. If this course may be considered successful, they certainly deserve much of the credit. We have drawn freely from all that we have observed and heard in the way of techniques and practices, and have attempted to organize and apply them to the best advantage under the circumstances peculiar to industry.

Beginning		Close		Increase			5 Months After Close		Increase over Begin.		
w.p.m.	% Comp.	w.p.m.	% Comp.	w.p.m.	%	Comp.-%	w.p.m.	% Comp.	w.p.m.	%	Comp.-%
286	75.0	600	80.0	314	110.0	6.7	455	82.5	169	59.2	10.0
342	75.0	670	87.5	328	96.0	16.7	492	82.5	150	44.0	10.0
329	77.5	728	87.5	399	121.3	12.9	511	85.0	182	55.2	9.7
273	87.5	468	92.5	195	71.5	5.7	420	87.5	147	54.0	0
316	77.5	750	95.0	434	137.3	22.6	645	87.5	329	100.4	12.9
277	77.5	520	87.5	243	87.7	12.9	429	80.0	152	54.5	3.2
273	80.0	503	90.0	230	84.5	12.5	442	85.0	169	62.0	6.3
256	85.0	481	87.5	225	88.0	2.9	299	77.5	43	16.8	8.8
208	62.5	420	95.0	212	102.0	52.0	325	70.0	117	57.0	12.0
234	57.5	381	62.5	147	63.0	8.7	277	67.5	43	18.4	17.4
190	70.0	290	82.5	100	52.7	17.9	260	75.0	70	36.8	7.1
269	85.0	412	97.5	143	53.3	14.7	351	85.0	82	32.0	0
204	72.5	282	87.5	78	38.2	20.7	238	85.0	34	16.7	17.3
269	47.5	455	75.0	186	69.2	58.0	360	77.5	91	33.8	63.2
368	77.5	660	92.5	292	79.5	19.4	425	80.0	57	15.5	3.2
299	57.5	446	80.0	147	49.3	39.2	342	65.0	43	14.3	13.0
299	72.5	565	72.5	266	89.0	0	368	75.0	69	23.2	3.5
217	85.0	520	97.5	303	139.6	14.7	364	90.0	147	68.0	5.9
Avg. 273	73.5	508	86.1	235	86.1	17.3	390	80.0	117	43.0	8.9
Amount of Original Increase Retained										50%	51.5%

SOME FACTORS IN THE READING BACKGROUND OF COLLEGE STUDENTS

Oscar S. Causey
Texas Christian University

Principals of representative high schools in one state were requested to furnish information that was considered by the writer to be of value in determining some of the significant factors in the reading background of college students. Principals of high schools of various sizes, both rural and urban, were requested to cooperate. One hundred replies were received promptly.

One request was for comment upon the often repeated statement, "Every high school teacher should be a reading teacher". The following fifty comments are typical of those received.

1. Excellent statement.
2. Not possible or practicable.
3. Yes, this is true even with mathematics.
4. It is a nice idea but hardly true. The average teacher is not prepared to teach reading.
5. True, but most eachers do not have the time for much supervised reading.
6. In senior high school, no. Not practical. Just as well say that all should be a shop, music, or Spanish teacher. Perhaps all English teachers should.
7. As true as can be, but we have few converts. However, we need to get our feet on the ground and do the job we should do before the high school gets them.
8. Ideal, but will never be done.
9. Yes, according to their training and ability, however, specialists are needed in this field and a definite reading program established in speed and comprehension.
10. Too little, too late.
11. Reading can be taught effectively only when it is taught in every class - not in just a reading class.
12. This is an important statement, but is somewhat limited because of lack of reading skills of many teachers.
13. Yes, except that the subject content, areas to be

explored, and voluminous cultivation of these special subdivisions of curriculum make concomitant attention mandatory.

14. We will not have a good reading program until this is true.
15. Every teacher is a reading teacher. She teaches the child to get throught from the printed page. Every teacher is concerned with vocabulary development of his particular area.
16. Every high school teacher should be interested in the general improvement of reading but special training is necessary for remedial work.
17. The statement is true, but so far we have failed to convince the teacher.
18. A teacher would include reading with a multitude of other things.
19. Most all learning in school is dependent upon ability to read. Because of their inability to read students want the teacher to tell them the answers. Learning through reading is more effective, therefore, teachers need to know how to teach reading to facilitate better reading.
20. I agree - this is not feasible because of the many difficulties involved in high school curriculum, abilities, etc.
21. Anyone who teaches, teaches reading.
22. Good reading habits and skills are certainly essential in the learning situation of every high school pupil--therefore every teacher should take proper notice and give due consideration to the reading habit and skills of every pupin in every subject.
23. Most high school teachers are carrying such a heavy load that they are unable to have reading classes. Favor having reading classes and reading teacher giving student credit when he takes reading course.
24. Developing study skills suitable to each different subject, including various types of reading habits, is the responsibility of every teacher. Teaching remedial reading requires specialized training in methods of teaching reading.
25. Every teacher should be able to give slow pupils some help in reading difficulty.
26. This is true but it oversimplifies the problem.
27. If a child can read, not just call words, it will help the child in any subject they are taking, from mathematics to literature.

28.We subscribe to this statement.
29.This is important because of the different types of reading requirements in the various subject matter fields.
30.By all means every teacher should know and practice the reading techniques pertinent to his or her subject. Science teachers or mathematics teachers will have a different vocabulary, different organization of textbooks and different methods of reading. Every teacher should have training in teaching reading in his particular field.
31.Very few are, seems that too many feel that students just learn reading.
32.If students are not taught to read thoy are going to make little progress in high school. Surely, every teacher should stress reading.
33.This is probably true, but the other often repeated statement is equally true, "What is everybody's business is nobody's business."
34.The statement speaks for itself.
35.A reading teacher is a specialist. Every teacher cannot teach reading.
36.In a sense this is true, but as a general rule, the classes are set up so that attention to reading problems in the classroom is almost impossible. Lack of materials keeps the average high school teacher from being much help.
37.True, but every teacher cannot do the job reserved for the specialist.
38.Unless we have a course that has for its primary objective the improvement of reading ability, every teacher must teach reading in their other classes.
39.In my opinion, the statement is true. We are doing our best to make it a practice.
40.I believe the statement is true.
41.Our school does not have an established program for improvement of reading ability.
42.Could this not be done by each teacher teaching vocabulary peculiar to their own subject as well as choosing current material and other material to the subject.
43.I heartily agree. Especially in high schools where special reading courses can or may not be included in curriculum.
44.True, but exceedingly difficult to secure.
45.This should be true. Every teacher could have the

opportunity if the proper training had been provided for him or her.

46. Reading being of fundamental importance in all activities; all teachers should be capable of assisting the student; however, I believe that those teachers who should be especially trained are the English, speech, history, science - those whose courses demand extensive reading.

47. Every high school teacher is a reading teacher.

48. Under the present setup this seems to be true. Yet, with adequate reading programs in the grades, it would not be necessary to such an extent.

49. Not unless he is prepared; not a hit or miss attempt at teaching reading.

50. There is a definite need for reading improvement in the high schools.

The principals were also asked to indicate the title or position of the person in charge of reading in their respective schools. The summary of the replies, arranged in descending order of frequency, is as follows: English teacher, reading teacher, counselor, director of reading program, principal, classroom teacher, director of curriculum, language-arts teacher, reading consultant, supervisor of reading, department chairman, director of clinic, school supervisor.

Fourteen of the schools reporting stated that high school credit was given for courses in which the major emphasis in the courses was placed upon improvement of reading ability. Seventy two percent of the principals reported that they have difficulty in finding teachers well qualified to teach reading in high school.

COUNSELING IN RELATION TO THE READING PROGRAM

Tandy W. McElwee
Louisiana State University

The remarks that I will make relative to counseling and the reading program are based primarily on the reading program as it is organized at Louisiana State University. The reading program at Louisiana State University is quite similar in many respects to those in other institutions; yet in some respects it is different. For that reason I would like to take a few minutes to describe briefly the reading program at Louisiana State University.

The Remedial Reading classes meet one hour a day, two days each week for a period of twelve weeks. The course is non-credit.

Students who score below a scaled score of 49 on the Cooperative Reading Test, Higher Level, are encouraged to enroll in the reading course. Approximately one-third of the students score below that point. It is not compulsory for students scoring below a scaled score of 49 to enroll in the course, but, if a student enrolls he is expected to complete the course. Any student who wishes to enroll in the course may do so regardless of his score.

The program is based on group instruction rather than individual instruction. Materials used in the reading classes are: Study Type of Reading Exercises, College Level, by Ruth Strang; Thirty Days to a More Powerful Vocabulary by Funk and Lewis; Reader's Digest; and Purposeful Reading in College by McCallister. The Tachistoscope and reading films are used in the class. Reading Rate Accelerators are available for use by the students outside of the classes.

I hope that the preceding comments, brief as they are, will help you to understand the remarks that are to follow.

The counseling relative to the reading program at Louisiana State University may be divided into two broad areas; first, the counseling with students prior to their enrollment in the reading course, and second, that counseling which is done in connection with the reading course.

The counseling that is done prior to enrollment in the reading course is done by a number of people and has as its main purpose the acquainting of students with the service that is available to them. The service is in the form of the reading course which is designed to help students improve their reading ability and consequently do better college work. It may seem a bit odd that one would have to "sell" reading improvement to a person who is a poor reader, but in a program such as ours where there is no credit to be earned from taking the course it sometimes takes quite a bit of salesmanship to get across to the students the fact that an improved reading ability will pay dividends in all classes taken.

The first counseling that is done relative to the reading program is by members of the faculty. Each new freshman is assigned to a faculty counselor whom he sees prior to registration. The faculty counselor discusses with the student the value of a good reading ability and and encourages the student to take advantage of the opportunity to enroll in the reading class if his reading ability is below average.

When the student presents himself for registration he again talks with a faculty member who assists him in registering. This faculty member is not necessarily his faculty counselor. The faculty member has available an alphabetic roster of all new freshmen. Data relative to the student's performance on the English, Chemistry, and Mathematics placement tests, his rank in his high school graduating class, and whether or not he scored below a scaled score of 49 on the reading test are on this roster. The faculty member urges each student who scored below a scaled score of 49 to enroll in the reading course.

After the student, who scored below a scaled score of 49, has completed registration for his academic courses he meets a representative of the Reading Department. He has already been acquainted with the reading program by the two previous conferences with faculty members and at this time the representative of the Reading Department discusses with him the organization of the reading classes and encourages him to enroll in one of the classes. Between fifty and sixty per cent of the students scoring below a scaled score of 49 enroll in one of the reading classes.

A check is made of the academic record of all students who were invited to enroll in the reading classes, but did not do so and all of these students are contacted again at the time they register for the second semester. The representative of the Reading Department again disucsses with these students the value of a good reading ability and suggests that they could improve their academic work by improving their reading ability. A majority of these students who did not enroll in reading during their first semester and who failed to do satisfactory academic work during their semester do enroll in one of the reading classes their second semester in school.

The previous comments may appear to have little relationship to counseling; but in a program organized on the basis as that at Louisiana State University the counseling done relative to the enrollment of students in the reading program is very necessary if an appreciable number of the students are to be served by the reading program since there is no academic credit, per se, to be earned by taking the reading course.

The second phase of counseling in relation to the reading program takes place after the students are enrolled in a reading class.

Counseling in relation to visual difficulties. Students enrolled in the reading class are given the Keystone Visual Survey Tests. The results of the tests are discussed with the students and any student whose tests results indicated a possible visual handicap is encouraged to visit his doctor or optometrist. It is suggested to all students that they should visit their doctor of optometrist if they experience eye strain as a result of reading.

Another phase of the counseling of students enrolled in the reading program is necessary because of the organization of our reading program. This is the counseling which is done relative to class attendance and dropping of the course. Possibly, the need for this counseling is brought about because we have failed to meet the needs of the students. However, most students feel that the course will do them some good. "I just don't have the time for it and besides that, I don't get credit for the course" is the usual answer we get when we ask the student why he wishes to drop the course. In a few instances we have found that the student is carrying a heavy academic load, in which case it is suggested that he would profit by dropping one of his regular academic courses and continue in the reading course. We made a comparison of the academic records of students who did not take the reading course. This study was made in terms of paired students. Students enrolled in the course were paired with students who did not take the course (on the basis of general academic ability and reading ability). When the results of this study are discussed with students wishing to drop the course the students usually volunteer to remain in the course and usually work harder at improving their reading ability.

The third and most improtant phase of counseling students enrolled in the reading course is that counseling which is done with the students relative to their individual reading problems. Even though the course is organized primarily on the basis of group instruction, each instructor has a conference with each of his students. During this conference the student's individual reading problems are discussed and the instructor helps the student work out a program of work to be carried on outside the reading classes. This program of work is designed to assist the student in improving the basic reading skills in which he is most deficient. The students are encouraged to come in and discuss their problems relative to reading and study.

The remarks I have made relative to counseling and the reading program may be somewhat different from the counseling which each of you has been doing in your reading program. I think all of us have to organize our programs to fit the particular situation at our institution. In that the primary purpose of the reading program at Louisiana State University is to assist students to develop a reading ability adequate to do successful college work, our first problem is to motivate the students to the point where they will avail themselves of the opportunities to improve their reading ability. Our second problem is to assist the students, who are desirous of improving their reading ability, to develop an adequate reading skill. Our counseling is done to solve these problems.

COUNSELING AND THE READING PROGRAM

Albert J. Kingston
Texas A. and M. College

Any institution of higher learning which includes in its offerings some sort of remedial or developmental reading program is, in my opinion, demonstrating its acceptance of that educational philosophy commonly called "the student personnel point of view." One of the tenets of the student personnel philosophy is the belief that any institution should be concerned with the development of the "whole student" or his total personality rather than merely concerning itself with his intellectual or academic growth. The philosophy also includes the belief that all students cannot be expected to adjust to college situations as rapidly and readily as others. Believing these things, such institutions are prepared not only to modify their programs so as to assist students, but also are prepared to assist some students to make necessary personal and individual adjustments. Thus, adjustment may result from modifications within the college program or within the student. Counseling may be said to represent one of the main methods through which changes are effected by the student. The development of insight into one's difficulties, the achievement of clearer and more feasible educational and vocational goals, the learning of more adequate social skills, and other gains too numerous to mention may all be products of the counseling process. On the other hand, a college reading program may be said to demonstrate a college's willingness to modify its curriculum to meet the needs of students. In one sense then, both counseling services and reading services may be said to have common goals and objectives - aiding the student to adjust to the college community. Does it not follow, that these services should be coordinated?

Most educators believe that reading is one of the most essential academic skills which a student needs if he is to adjust successfully to college life. Inadequate reading skills may result in a student encountering academic failure or making slower scholastic progress than might otherwise be anticipated. A student in this situation often develops feelings of insecurity and anxiety. His anxiety sometimes further prevents him from concentrating on his studies and he fails to progress as well as he otherwise might. This condition results in complications as it further increases his anxieties. A cyclical pattern or "vicious circle" results. In such cases two different approaches have been demonstrated successfully. Counseling which relieves the student's anxieties and reduces his tensions often results in enabling him to operate more effectively in learning situations. Sometimes his reading skills appear to improve spontaneously. Another approach is to concentrate upon the development of improved reading skills. In such situations the student's anxieties may be relieved as he discovers he can more adequately meet academic demands. Profitable results have been obtained through both methods. If this is true then, it would seem reasonable that a coordinated approach might be best in such cases and that the most efficacious results can be obtained when both counseling and reading services are employed and coordinated. We might ask ourselves if we are securing the maximum use of our counseling services for such purposes.

Another intimate relationship between the reading program and the counseling service should be emphasized. Each service is in an unusual position to discover students who need the specialized assistance provided by the other. Counselors and reading specialists should be alert at all times to the advisability of referring students. Only when this procedure is followed can effective assistance be given to some students. In many colleges and universities the reading program is administered by a non-psychologically or non-clinically oriented department. In such institutions the testing and counseling service must be utilized to assist in the program. Valuable diagnostic information can be furnished by psychological testing and all of us will agree that we can more readily assist a student when we possess accurate information about his interests, motives, intelligence, and other characteristics. Without complete testing it is sometimes impossible to determine which factors are causal and which are secondary or even symptomatic to the reading disability.

It is my opinion that the college reading program is so closely related to the counseling services in goals, objectives, and methods that only when close coordination is maintained can success be achieved.

READING PROGRAMS FOR ADULTS

A.J. Pellettieri

University of Houston

This presentation is intended to supply some answers to questions raised at last year's reading conference. It appeared at that time that answers were needed to such questions as, "How long should adult programs continue?" and "How long should each session last?". There were also questions hinging upon tests used in the measuring of the rate of reading and comprehension. The author will not be able to supply the pictorial presentation and will therefore confine himself to enumerating some of the main ideas.

1. One study made by the writer showed that graduate students made no appreciable gains during a period of time while other unselected groups of adults receiving training made rather significant gains in similar tests. Both the Iowa Silent Reading and the Otis Test of Intelligence were administered to both groups. The graduate group received no improvement of reading instruction. Conclusion: It appears that reading among adults can become static. It also appears that adults can increase somewhat significantly in effective reading performance.

2. A second study conducted by the author delt with senior high students. This group was made up of an average distribution of high school seniors except for a number which seemed to excel other seniors in the same school. A class in the improvement of reading was conducted. After twelve weeks, the last session used for testing, profiles were made of the two students showing the slowest rate of improvement and the two students showing the fastest rate of improvement. Conclusion: The character of improvement of all four of the students seems to be consistently positive. A gradual growth for the slower and a rapid growth for the faster students. There is an indication that raining in reading improvement is desirable for high school students.

3. An appraisal of profiles of standardized reading tests would show wide discrepancies even among good readers. Adults who score above the norms in advanced tests on the high school and college level, would make low scores on such things as directed

reading, location of information, and the selection of key words. These low sub-test scores probably reflect occupational practices. People employed in research laboratories may have little or no need for skill in indexing.

4. Testing for comprehension poses an unsolved problem. The writer has administered comprehension test questions to students who had not read the assignment. These students have obtained rather high scores. The questions as to whether reading is necessary for comprehension are to be debated under such conditions.

An analysis of a so called three-part comprehension test, (a) reading for detail (b) reading for central thought (c) reading for inferences, reveals that one's ability to correctly answer five or more questions out of seven does not mean that he will answer correctly the questions dealing with central thought. Furthermore, the ability to correctly infer does not mean that the person will answer correctly the central thought or be successful in detailed questions.

5. The use of pacers and flash devices, when contained within the limits for which they were devised, proves to be beneficial. Data for our adult group indicate that progress made in free reading, under pacing conditions and with tachistoscopic material carried on concurrently, is related. This is not intended to mean that there is transfer of training.

6. Multiple sessions per week over a period of three months seem to yield better results than short sessions or classes which are conducted on a one hour, one time a week basis.

Adult courses which meet two hours on a one time a week basis seem to yield better results than classes which meet for only one hour.

Courses which provide for theory and laboratory sessions seem to be preferred by adults more than classes conducted on a practice basis only. Among comparable adults, those who attend more frequently and regularly make the greater gains.

Rechecks show that gains made are retained when the individual continues to apply the new skills acquired during training. Frequently over looked is the fact that short classes do not lead to lasting and permanent gains.

I would like to suggest to professional members of the conference that these adult courses be more appropriately labeled as Reading Efficiency or Reading Improvement courses. May I also suggest that we emphasize meaning, not speed. Speed is fairly readily obtained as a by-product in a course of reading improvement.

The very remarkable success of colleges and universities during the last six or eight years with reading programs designed for improving reading ability of their students has led to frequent inquiries about similar programs for adults.

For the purpose of determining the extent of adult reading improvement programs offered by colleges and universities the chairman of the Executive Committee of the Southwest Reading Conference sent recently an inquiry to all the state universities in the country and to one of the larger private institutions in each state. Twenty eight replies were received from state universities and twenty three from privately controlled institutions.

The questions submitted and the summary of the data received are given below.

COURSES FOR IMPROVING READING ABILITY OF ADULTS

1. Do you offer a course that has as its chief purpose improvement of reading ability of adults other than those enrolled as regular day students in your institution?
   Yes, 28. No, 23.

2. Which department or school in your institution offeres the course?
   Psychology, 3. Education, 8. English, 3. Other, 12. ("Other" includes student personnel, extension, testing services, adult education, guidance, speech and general education).

3. If you are not giving such a course are you planning a course?
   Yes, 6. No, 14.

4. Length of course in weeks?

7 weeks, 2. 8 weeks, 1. 9 weeks, 1. 10 weeks, 10. 11 weeks, 1. 12 weeks, 5. 15 weeks, 4. 16 weeks, 1. 17 weeks, 1. 18 weeks, 1.

5. Class hours of attendance required?
The range is from 10 to 64.

6. Number of meetings per week?
Range 1 to 5.

7. Are credit hours given for the course?
Yes, 9. No, 18.

8. How much credit?
Seven institutions give credit. Credit varies from 1 to 3 semester hours.

9. If no credit is allowed how is the course classified?
Service courses, 9. Extension, 10. Others, 4.

10. Number of students enrolled in the course this semester?
Range--smallest enrollment 14, largest enrollment 500. Total in all institutions reporting, 2334.

11. Is the course offered away from the campus?
Yes, 10. No, 17.

12. Names of workbooks used by the students?
Increasing Reading Efficiency, by Lyle L. Miller. Study Type of Reading Exercises, by Ruth Strang. Better Reading Books, by Elizabeth Simpson. How to Read Better and Faster, by Norman Lewis. Effective Study, by Robinson. A Manual of Reading of Exercises for Freshmen, by Pressey. A College Reading Workbook, by Sheldon and Carrillo. Efficient Reading, by Brown.

13. Reading insturments used?
Reading pacers, 23. Films, 17. Tachistoscopes, 18. Others, 3.

SOME CURRENT ASPECTS OF READING

Oscar S. Causey
Texas Christian University

During the last two decades numerous articles on the subject of reading have appeared in magazines and professional journals and the number is increasing.

Seldom does a month pass in which popular magazines fail to publish several articles relating to improvement of reading ability. Recently editors and writers for trade journals have joined the movement with at least one result, namely, adding new words to the English language. The word BRIEF-CASE-ITIS is an example. Brief-case-itis is a condition said to affect business men whose brief-cases bulge excessively with reports, documents, briefs, etc., because the average business man cannot read at the needed speed.

Books written on reading have become popular. Tens of thousands of copies of How To Read Better and Faster by Norman Lewis[1] have been sold. How To Read a Book by Mortimer Adler[2] has gone through the twentieth printing.

In recent years educational leaders have been giving a larger place in educational programs to the teaching of reading from the elementary grades to graduate school. In a recent article[3] Dr. Rudolph Fiehler pointed out that "the 24th Yearbook of the National Society for the Study of Education went so far as to advocate specific reading instruction in the first three grades only. Twelve years later, in its 36th Yearbook, the same organization advocated reading instruction through each year of the common school program. Today there is a growing acceptance that training in reading can be helpful at every level of instruction, and that a reading improvement program in college is justifies if it produces only an increase in rate of reading."

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[1] Norman Lewis, How To Read Better and Faster, Thomas Crowell Co. N.Y., 1951.

[2] Mortimer Adler, How To Read A Book, Simon Schuster Company, N.Y.

[3] Rudolph Fiehler, A Summary, 1952 Yearbook of Southwest Reading Conference for Colleges and Universities, Texas Christian University Press, Fort Worth, Texas.

One writer, while discussing the producer-consumer aspects of reading, pointed out that education in America has produced such an enormous demand for reading material that publishers in the United States printed enough books last year to fill a bookshelf reaching from the Atlantic to the Pacific.

In all the copies of the two newspapers in this country having the largest circulation last year had been used as a highway covering, there would have been a number of pages ample to cover a four-lane highway around the earth at the equator. If all the copies published last year of the monthly magazine having the largest circulation had been placed on a single shelf, the length of the shelf would be more than four hundred miles in length. If all the newspapers published in the United States in any year since World War II had been used to plaster a billboard replacing the Iron Curtain, the billboard would extend from the Black Sea to the Baltic Sea and reach into the stratosphere.

Administrators in higher education are recognizing the progress made since World War II in development of methods, techniques, procedures and materials which are highly effective in improving the reading ability of college students. Evidence of this recognition by administrators was revealed by a recent survey of all higher institutions in ten states west of the Mississippi River. Forty-six of the colleges and universities reported reading programs designed for the improvement of reading ability of their students.

Properly equipped reading laboratories and clinics have adequate reading materials that have been specially prepared and graded. The proper grading of material is important because of the great differences in reading ability of college students. Some college students have only ninth grade reading ability, as determined by standardized reading tests. On the other hand, some college freshmen read as well as some graduate students. This difference in reading ability makes apparent the need for materials of different levels of difficulty. (The level of difficulty of this article, as measured by the Rudolf Flesch Formula, is approximately the same as the average materials read by college students.)

Mechanical instruments are used extensively in many good college reading programs. Thirty-six of the forty-six institutions referred to above reported the use of instruments. Reading pacers are effective motivation devices. Tachistoscopes are used for development of quickness of visual perception. Sixteen millimeter films are used for improvement of comprehension and reading rate. Telebinoculars, Ortho-Raters and other insturments are used for testing accuracy of vision. The Ophthalmograph is important in diagnosing the reading patters of students.

College reading programs are usually under the administration of the department of Education, English or psychology, or are directed by the counseling service.

Any person with fair intelligence and vision and a desire to improve his reading comprehension and speed can make marked improvement, even if his reading ability is already above average. Many business people as well as professional men and women who are required to do extensive reading find it advantageous to take courses for the improvement of their reading skill. Many hours are saved by readers who have good comprehension and a high reading rate.

Good reading programs can be depended upon to produce good results. A student who was dropped from a university was told by his counselor that his only academic difficulty was that he was a very poor reader A few weeks later, when he started a reading training program, he was found to have a reading rate of one-hundred seventy-five words a minute with a comprehension of seventy-four percent. When he finished the course he was reading three hundred eighty words a minute with a comprehension of eighty-eight percent. A school principal increased his rate seventy-two percent. A high school girl, who was making low grades, increased her comprehension and doubled her reading speed. An associate professor in a university increased his reading score 81%.

There is a close relationship between a person's reading vocabulary and success as success is measured in America. A recent study revealed, with surprisingly few exceptions, that persons who have attained more than average success in their field of endeavor have large vocabularies whether or not they had a formal education. There is also a close relationship between the size and quality of one's vocabulary and his reading ability. The size of a person's vocabulary would be measured by the number of words that he knows, while the quality of it would include the different meanings attached to words he knows. For example, the word RUN has fifty-one meanings.

Since the spotlight has been turned on development of reading ability many people have asked, "What is reading?" One author says, "Reading is thinking." A psychologist says it is a "mental process." A psychiatrist says it is "an emotional experience." An educator syas it is the "ability to capture the thoughts of a writer as they are expressed on the printed page." An advertising expert says that "it is a means of increasing sales." Martin Luther considered it a way of extending religion. A communist thinks reading is one of the means of gaining additional fellow-travelers. The student who has good reading skills says reading is fun. The poor reader calls it hard work.

Dr. Adler, in his book referred to above, says there are twenty-four meanings of the verb READ. We read a book, newspaper or magazine. We read between the lines. Some people read palms while others read crystal balls. Sometimes we read billboards that have not a sentence in print. Astronomers read the stars. Some of us read the signs of the times, while others are reading speedometers or thermometers.

Writers are doing more and more writing. Publishers are doing more and more publishing. Readers are doing more and more reading. If all readers should make a decision to read, not only more and more, but also better and better, what would be the effect upon the writer-publisher-reader triumvirate?

SOME RECENT OBSERVATIONS

Ralph W. House

State Teachers College, Kirksville, Missouri

The observations reported here are the result of personal visits made this year to colleges and universities in six states--Iowa, Nebraska, Missouri, Arkansas, Texas and Oklahoma.

The purpose of the visits was (1) to get better acquainted personally with professors in colleges and universities who are working in the reading field, (2) to observe the physical facilities for reading programs, (3) to identify the reading goals, (4) to request summaries of programs for presentation to this meeting of the Conference.

Very remarkable progress is evident in the area visited in provision made for both physical facilities and teaching staff for reading programs. At the risk of incurring the ill-will of some, I would like to report that impressive programs were observed at the University of Oklahoma, the University of Texas, University Houston, Texas A. & M., Southern Methodist University and Texas Christian University. More than fifteen hundred students are improving their reading reading ability in the reading laboratories and clinics of these institutions each year. Two or more of the following mechanical aids are in use in each institution: reading pacers, films, tachistoscopes, telebinoculars. Testing has significant place in each of the programs.

BRIEF SUMMARIES

Several persons in charge of reading programs in institutions visited were requested to submit a summary of the purposes of their programs and the procedures used. The following are included here.

From the University of Texas' Reading Laboratory

A. Shaping the Students Point-of-View (from Dr. Bliesmer).

We feel that the most unique way in which we help students in our reading program is in our attempt to place students in groups where they will have the best chance for receiving the specific help they most need. Most of these groups are small (10 to 15 students), and we stress various comprehension skills in the small groups. Our largest groups participate in a program in which speed of reading is emphasized and in which reading films are used. I believe the paper which Dr. Dotson gave you will give you a little more detailed explanation of our work here. (Dr. Bliesmer)

B. *The Reading Improvement Program* (from Dr. Dotson).

The Reading Program on this campus is very fortunate in its particular setting - by being in the Testing and Guidance bureau we are able to be of service to the student in many of the facets of himself that he may wish to investigate in trying to diagnose his reading needs and himself. We have counselors who can discuss with him his vocational choice, academic problems and personal problems if he feels it advantageous to explore in these areas. Should the student and the counselor decide that some objective tests would help the student in his effort to understand himself, the psychometric division is equipped to administer and score a wide range of aptitude, achievement, interest and personality tests. There are clinical psychologists who can administer and interpret projective tests. And if the student and counselor should wish to confer with a psychiatrist the student is referred to the Health Center. All of this is part of our Reading Program.

Now, all of this gives you some idea of the scope and general thinking that goes into our Reading Improvement Program and consequently determines what it will be. I would like to discuss with you, more specifically the Reading Program itself. I think I'll do this by giving you a description, or an outline, of the process a student goes through in the Reading Program.

I. Students coming to the Bureau are usually self-referred. In many instances students will come when deans or instructors have suggested the services, but most of them come as self-referrals. This means they actively want help.

II. The Reading Improvement Program is non-credit, so the student comes seeking only improvement.

III. First, he is given a battery of tests--to date including:
   a. Two reading acievement tests
   b. A scholastic aptitude test
   c. A personality test

IV. On the basis of the reading tests' scores he is placed in a group:
   a. In this group setting he gets his test scores

interpreted to him.

b. He may seek an individual conference with one of us for further discussion of his test scores.

V. The Group meets for one hour, three times a week, and the vocabulary group to which he is assigned meets for one hour twice a week.

VI. Let me tell you about the types of groups we have this semester.

a. One group consists of very slow readers and inadequate comprehenders--persons in this group are word-for-word readers; they literally plod. With this group we initially concentrate on freeing them from this word-for-word reading--then move into comprehension skills.

b. Another group is composed of students who read somewhat slowly and whose comprehension is a little better. Here we work on various comprehension skills; locating main ideas, skimming, critical reading, but all this is done with an emphasis on reading a little faster.

c. A third group consists of very good readers--rate may be a little slow, but the comprehension scores are better than average. In this group we work on essentially the same skills as in the latter group, but in more difficult manuals--again working for speed.

d. The fourth group works principally on increasing their rate of reading, with only minor emphasis on comprehension---no poor comprehenders are put in this group. We use films as a pacer for this group.

Then there are two vocabulary groups---one for those whose vocabulary is rather restricted and the other for persons whose vocabulary is rather varied or even better than average.

VII. The program may vary in length from 9 weeks for the film group to two semesters for some of those needing more work.

VIII. If a student poses an especially complex problem --from the viewpoint of diagnosing his reading skills, Dr. Emery Bliesmer, our reading consultant, will give him a rather thorough diagnostic battery, and the student gets individual help.

IX. At the end of the particular program for the student, he is given an equivalent form of one of the reading tests he took upon entering the program. This is used to give us some objective measure of his improvement. This test is also interpreted to the student.

From Texas Christian University's Reading Laboratory:

A. Shaping the Student's Point-of-View.

Success in college depends upon the ability of a student to read well. The bulk of instruction is to be found in books. Mastery of books is open only to those who can read with some fair speed and some fair degree of comprehension. With few exceptions students who are put on probation or who are dropped from college for poor scholarship are students who read slowly and with poor comprehension. Many students have not developed reading ability comparable to their intelligence. That is, they have minds good enough to learn even more if they could be trained to better reading habits. All college students, regardless of how well or how poorly they read, can improve their reading ability by taking training offered in a well equipped and well directed reading laboratory.

The program is not exclusively a remedial program. Students who are already good readers are admitted to the laboratory. A number of graduate students and adults from the professional and business field take the work.

B. Students classified in three ways.

1. Students who are deficient in reading
2. Students who have approximately average reading ability.
3. Students above average in reading ability who want to become highly proficient in use of the printed page.

C. Twenty-two Suggestions to students.

Think with the writer. Think beyond the writer. Ignore external auditory stimuli. Get the authors thoughts quickly. Suppress internal wayward emotions. Trust your mind while reading. Your mind can be trained to work faster. Pleasure may come from agreeing with the author. Increase your vocabulary by learning new words. Practice trusting your mind. Your mind has power not yet used. Satisfaction may result from disagreeing with the writer. Let your mind enjoy action while reading. Read, read, read. Reading is a pleasure.

Increase your vocabulary by learning new meanings of words you already know. Some people cheat themselves by not harnessing the power of their minds. Do you? Develop additional mental power by reading. Think while reading. Memorize rarely. Fast comprehension of the printed page is excellent practice in quick thinking. Use your mind. Read, read, read, read.

WORD ATTACK AND VOCABULARY DEVELOPMENT

Mrs. Hazel Horn Carroll (Mrs. Timothy)
Southern Methodist University

Word attack will be emphasized in this discussion with vocabulary development as a by-product. To put it in a popular streamlined title--Word Attack Goes to College.

After all, our vocabularies do enlarge as we sharpen our word attack skills.

To begin with, I should like to take a few minutes to ask you to write down what you do when you meet an unfamiliar word.

Last year the director of our Reading Clinic, was working with a group of 90 school principals and administrators. She asked them for this same information I have requested from you.

Some of the answers would have startled you and caused you to think of the need for word attack skills at any level. One man said: "Get someone to go to the dictionary." Another said, "I ask my wife." Still another replied, "If is is essential that I get the meaning I go to the dictionary."

Of the 90 educators most used the dictionary or contextual clues to gain the meaning of new words. Only eight used word-form clues. Eight used structural analysis and seven used phonetic analysis.

In reporting these answers I have mentioned several methods of word attack. Now, I should like to list five methods which I shall discuss. They are: word form, structural analysis, phonetic analysis, contextual clues and use of the dictionary.

I mentioned the results of this informal questionnaire to indicate the need for the teaching of word attack skills in college so that they may be used there and in adult life.

Frances Trigg says in "Improve Your Reading" that many college students do not realize how many words they do not know, and do not care enough to do anything about it until they are taught how important a good vocabulary is.

She tells this interesting little story. She has a student pretend he is going into a bookstore to buy a book. Then all the words in the book he doesn't know say, "Let's disappear. This student wouldn't appreciate us anyhow because he doesn't know what we mean." The student would pick up the book and in astonishment call the clerk and complain, "Look here, this isn't right. I'm paying hard earned cash for this book and I do not want one full of blank spaces. I want everything I'm paying for." He then would pick another book but he still wouldn't get what he was paying for unless he had some way to unlock the words he did not know.

For a thorough understanding of these unlocking skills I am going to explain them as they are first taught.

Using word form clues is the noting of likenesses and differences in words. The child who notices that sand is just like hand except for the beginning is noting word form. The skills essential (noting likenesses and differences) for using word form clues are basic to successful structural and phonetic analysis.

These two types of analysis are interrelated and often must be combined in attacking a work. In these instances structural analysis logically preceded phonetic analysis in the word attack process.

Careful scrutiny of words shows that they are related in families. Each word has its ancestors, cousins and distant relatives.

Each family is descended from a parent word, and through every word that belongs to that family has a specific meaning of its own, it is always related to the meaning of the parent word. For example, the words port, portfolio, portable, and porter are all descendants of the word porto, a Latin verb that means "to carry."

Each has its particular meaning but they all refer in some way to the act of carrying. Now, suppose you came across the word portage--you could guess it was a cousin of porter and a descendant of Papa Porto. So, learning a number of parent or root words of the English language will help you to guess the family connection of many unfamiliar words you meet.

Learning the meaning of commonly used prefixes and suffixes will give you some more tools in your word detective kit.

So, learning parents, prefixes and suffixes will make old friends of words once strange. If you meet importable, you know im means "in," port means "to carry" and able means what it says--wholly, "able to carry in."

Another phase of structural analysis is dividing words into syllables. And if you can pronounce the syllables that appear you will find that many words that were unfamiliar in print are familiar when you pronounce them.

A very usable system of dividing words is given by Kottmeyer in his "Handbook for Remedial Reading." He gives the rule that the number of vowels (except final E and double vowels which count as one) determine the number of syllables a word will have.

Skills become more automatic when they are practiced systematically and regularly. In order to provide this I have the practice in my classes of having what we call "the three new words" on the board for each meeting. These are not always new words, but each one represents one of the three main parts of structural analysis which are: looking for parts of a compound word, looking for familiar prefixes, suffixes and roots, and dividing words according to the rules of patterns just explained. These three words are kept in columns, one column for each division method. A new word is added to each column at each class meeting.

Examples:

RECEIVER/SHIP
DOOR/PLATE
EDGE/WISE

RE/DOUBT/ABLE
DIS/MEMBER/MENT
DUCT/LESS

v cvc cv
RE/DUN/DANT
vc cv cv
DOC/TO/RATE
vc cv cvc cv
EC/TO/DER/MAL

The building of these lists in columns inpresses on the students these methods of attack and gives to me far better results than any other method of practicing them.

Phonetic analysis will not be given as much emphasis in a college group as structural analysis but the reviewing of some phonetic elements is helpful, I believe. The ones I suggest are: (1) Two vowel letters may be used to represent variant single vowel sounds as AI in rain and plaid, and as OO in food and good. (2) Diphthongs or two vowel sounds blended to form one speech sound. (3) The only vowel sound in a word or syllable is affected by an "R" if the "R" follows it. (4) If "A" is the only vowel in a syllable or word and it is followed by "l" or "w", the "a" then has neither its long nor its short sound.

These rules are most easily taught, I believe, by posting a pronunciation chart containing these elements and a key word. The list I use is:

oi-oy--oil--boy
ou--house
ar--star
ur--turtle
er--fern
ir--bird

ar-aw--taught-strawberry
ay--tray
ew--screw
oo--broom
oo--book
ai--snail
ai--plaid

Last year at this conference Dr. Fiehler presented a most interesting discussion of this system of pronouncing and getting the sound of words by using helper words. For example, malign could be pronounced with the help of sign and align.

One of the most profitable and enjoyable means of recognizing words and getting their meanings is from context. The necessary context may come before, after or both before and after the unknown word. It may appear as an appositive, as a qualifying phrase, or in parenthesis.

Guessing meanings from context is a valuable device--and according to our informal surveys, the most frequently used device. But to depend on this alone would cause many mistakes.

The fifth and last method of word attack which I shall mention is use of the dictionary. I put it last because I believe that other methods should be used first, so as not to interrupt reading. But it is a valuable tool and one that should be used easily. To do this, use of guide words can be taught. (Students don't always reach college knowing this.)

It usually is profitable to discuss work orgins, synonyms, antonyms and homonyms. The big unabridged dictionaries will, of course, give more complete and detailed information. The dictionary should be used--but used wisely and as a tool--not as a crutch.

I have discussed word form clues, structural and phonetic analysis, contextual clues and use of a dictionary as five methods of word attack. The use of these will aid in word recognition and word meaning.

GROUPING IN REMEDIAL READING

Elsie Dotson
University of Texas

I. Since I am currently involved with this problem of trying to group students in the most effective manner, I have several rather strong feelings on the subject, and the first that comes to mind (I'm sure this is because it is the one that has afforded me the most difficulty lately) is the multiplicity of practical considerations that you need to have in order to launch into this. I would like to go into a few of these with you, since they are assuming such a place of eminence in my thinking.

A. Sufficient time for individual interviews. Anytime you work on a group basis, you are going to have to allow time for individual contacts.

B. Adequate lesson preparation and sufficient time in which to do this. In working with people on this problem of reading improvement, you will have to do a lot of improvising, i.e., using materials in ways other than those designated in manuals and finding new materials to meet current needs. Also, you have to know the materials well enough to be able to use them in stimulating further thinking. Another factor involved in this consideration of adequate preparation is planning for diversity within the group. There may be times when you will want to put the group on an assignment while you work with only one or two members of the group. This involves putting the group on a meaningful task--not just one that will keep them occupied while you work with smaller numbers.

C. Diversity of materials. As you can see from the previous point I just discussed, you will need a diversity of materials if you diversify the group. Also, you may want to switch activities entirely for a while and this may necessitate completely different materials.

D. Interest in group activity. On a more personal basis--but a very practical one--working with groups requires a belief, desire, and proclivity to work in a group situation.

These are some of the things I think a person should think through thoroughly if he is interested in working with groups. And I cannot emphasize enough the amount of time you will need for preparation and for individual contacts.

II. Why group? Now let us go into some of the why's of grouping.

A. Homogenous groupings:
Well, of course, one of the most obvious and plausible reasons for grouping is to try to get students with similar problems in the same group, thereby making it possible for you to work more intensively with the problem at hand.

B. Vary the size of the groups:
By grouping, you can vary the size of the group according to the goals you set up for each group-the goals being determined to a great extent by the needs of the students. Therefore, in my opinion, some skills lend themselves to a large group approach--one that is relatively mechanical --such as working on increasing rate of reading, while the optimum conditions for the acquisition of most comprehension skills call for smaller groups.

C. Individualized approach:
If you are able to determine when and where smaller groups are the most effective setting for certain studies, then you can use a more individualized approach within the smaller group. The members within the group will have a greater opportunity to express themselves, both to you and to each other.

D. Gives the instructor a chance to keep in tempo with the individual. By working in smaller groups the instructor knows when to change the activity of the group, when to work on different skills. By working more intimately with the group, the insturctor is better able to know when to reassure, to support, and to criticize. Also, the instructor has a better chance to know when to refer the student to 'other agencies which might be able to meet other needs that could be interfering with the student's efficiency. Such other agencies as provide: (1) Vocational guidance, (2) personal counseling, (3) opthalmological care, and (4) tutoring.

E. Greater opportunity for diagnosis. By working in smaller groups the instructor is confronted with an opportunity for continuing diagnosis and analysis of the student and his reading skills.

F. Small homogenious groups provide a greater growth climate. In a smaller group setting the student has a greater opportunity to find himself.

   1. Gives him a chance to get support through identifying with others. I have noticed that in groups in which there is a great diversity of skills, some students tend to shut themselves off from the group. But a similarity of preformance seems to invite participation; with others like himself the student is freer to see himself as he is--to explore then, why he is this way, and why others are. It is rather obvious that the student must first accept his his level of preformance before he can change it.

   2. Social climate. Small informal groups soon become a social as well as an instructional gathering. This makes for more interaction, self exploration, group reassurance, encouragement, support and criticism. Also, it is a new reading atmosphere, and thereby becomes a positive conditioning experience in place of the unpleasant experiences the student has had previously with reading.

III. Basis for grouping:

Well, after all this talk about why one should try to group--we come to the basis for grouping. This is an enigma to me, I will admit. What is the most effective method of grouping? Instead of attempting to answer that question--for I donot know the answer--just let me tell you how we are doing it at the University of Texas and why.

A. Small groups, you gathered from all I have said previously that I favor a relatively small group, by this I mean anywhere from 5 to 15.

B. Homogenous aspects. Also you have gathered that I believe people of similar levels of attainment should be grouped together. We use a somewhat gross means of doing this--namely:

   (1) All students who, on the DRT, read below 200 wpm and who get below 25% of the comprehension questions right, are put in one group.

   (2) Students who, on the DRT, read at a rate of between 200 wpm and 300 wpm and who get 75% or

more of the comprehension questions right are grouped together.

(3) Those reading between 200 wpm and 300 wpm but who get only about 50% of the comprehension questions correct are grouped together.

(4) Those reading faster than 300 wpm and who get 75% or more of the questions correct are grouped together.

By grouping this way we have eliminated two rather obvious differences in skills--rate and comprehension.

All we are aiming for here is that on one will finish reading way ahead of the others and no one will consistently get more right or wrong that the others when we discuss meanings. As I have mentioned before, it has been my observation that glaring discrepancies seem to serve to drive some students away from the group. We do shift students from group to group. It sometimes happens that even though a person's scores on the DRT are similar to the scores of others in his group, his behavior in the reading program is quite divergent from that of the others. In this case he is usually shifted to another group.

I am sure that you, like I, feel that grouping is one of the most pertinent problems facing us today and should any of you have other basis for grouping I would welcome the opportunity to discuss it with you.

THE SOUTHWEST READING CONFERENCE, 1951-1953

Miss Lucile Willowby
University of Oklahoma

Because the Southwest Reading Conference is a unique organization, so far as any of its members know, some of the details of its origin and function may be of interest to new members of the Conference or to college reading specialists in other sections of the United States.

In the fall of 1951, Oscar S. Causey, Director of the Reading Laboratory, Texas Christian University, wrote to the directors of several other reading programs at Southwestern colleges, asking if they felt that a conference on college reading would be useful. The replies to this inquiry encouraged him to go ahead with plans for the first meeting of the Conference, which was held on April 25, 1952 at Texas Christian University. The program for this first meeting was planned by Dr. Albert J. Kingston, Jr., of Texas A. and M., Louie Harris of Oklahoma College for Women, and Dr. William Eller of the University of Oklahoma and Oscar S. Causey.

Representatives from five states attended the April meeting in 1952, which was devoted to the practical problems of operation that were encountered by the reading improvement programs in the region and were suggested by the theme: "Developing a Reading Program for College Students." Because there were quite a few persons in attendance who had not yet set up their local reading programs, but who were faced with this necessity, the Conference program evolved into a series of discussions in which the directors of the large college reading programs shared their experience-based "know-how" with the people who had yet to build their programs.

At the closing session, the Conference voted to provide for a continuing organization and elected Mr. Causey chairman of a committee authorized to publish the proceedings of the Conference and to arrange for a 1953 meeting. Additional members of the executive committee included Rudolph Fichler, Head of the English Department, Southern (Arkansas) State College; Louie E. Harris, Department of Psychology, Oklahoma College for Women; Albert J. Kingston, Jr., Director of the Reading Laboratory, Texas A. and M.; and William Eller, Director of the Reading Laboratory and Clinic, University of Oklahoma.

Purposes of the organization were to make known to other interested persons the procedures used in programs of college level and to encourage further experimentation and research. Membership was extended also to those associated with industrial and other adult reading improvement programs.

The second annual meeting was held December 12-13, 1952, at Texas Christian University, as the result of of a decision to have the meetings during the first semester rather than in the spring. Theme of the Conference and of the 1952 yearbook was "Improving Reading Programs for College Students and Adults." Mr. Causey was again named chairman of the executive committee which included Miss Loris DeFigh, University of Tulsa; Tandy W. McElwee, Louisiana State University; A. J. Pellettieri, University of Houston; and Dr. Kingston.

"What Colleges Are Doing with Reading Programs" was the theme of the third annual Conference December 11-12, 1953, at Texas Christian University. At the business session it was voted to change the executive committee to six members serving three-year terms, with provisions made in the election of the six persons in 1953 to allow the election of two committee members each year thereafter. It was also decided to elect two from the retiring committee and to limit membership on the executive committee to two persons from any one state.

The new executive committee includes Causey, who was subsequently named chairman, and Kingston from the retiring committee for three-year terms; Ralph C. Staiger, Mississippi Southern University, and Eller for two-year terms; and Mrs. Dorothy Cantrell, Arkansas State Teachers College, and Roy Sommerfeld, Oklahoma A. and M., for one-year terms.

Indicative of the variety of sponsors of reading programs and of the type of persons interested in the reading problem at the college level is the distribution by position and departments of the representatives at the conferences. The second meeting has been chosen to represent the three meetings:

Director of reading clinics or laboratories	8
Reading consultants or teachers	3
Deans	2
Heads of Departments of English	3
Director of Testing and Guidance	1
Director of Guidance	1

Counselor-Psychologist	1
Counselors in Guidance	2
President of College	1
Teachers (from instructors to professors)	
English	6
Education	10
Social sciences, history	2
Psychology	2
Guidance	1
Staff Members of Industrial Programs	4
Representing High Schools	13
Graduate Students	3
Optometrists	4

(Some others did not indicate positions or departments.)

The increase in the attendance and the number of institutions represented at successive Conferences reflects the growth of the Conference and the continued interest in the problems of reading at the adult level. At the first meeting an attendance of forty four (the forty-two anmes listed in the Proceedings do not include that of Dean Thomas F. Richardson, who appeared on the program) represented twenty-nine colleges in five states--Texas, Oklahoma, Arkansas, New Mexico, and Louisiana; six high schools in Oklahoma and Texas; and optometrists.

According to the second yearbook, attendance at the second meeting was seventy two and represented thirty-three colleges in seven states, Kansas and Mississippi being the two new ones; four industries which sponsor adult reading programs; five high schools in two states; and optometrists. This representation continued to expand in 1953 with Missouri and Indiana making a total of nine states of which forty-two colleges and universities were represented. Representation of the high schools, industrial programs, and optometrists remained about the same. Altogether, fifty-six different colleges and universities and sixteen high schools have been represented at the three meetings held by the Southwest Reading Conference.

One of the most obvious trends in the program of the Conference has been toward research. The first meetings were necessarily concerned with practical problems: how to use the tachistoscope, the use of reading accelerators, etc. Research was not excluded, however, and increased in importance in the successive programs. It appears that results of experimentation and research will continue to grow in importance in future meetings.

REPRESENTATIVES IN ATTENDANCE AT ANNUAL MEETING

ARKANSAS

Mrs. Dorothy Cantrell, Arkansas State Teachers College, Conway

Miss Jacqueline DeCamp, Arkansas State Teachers College, Conway

Dr. Rudolph Fiehler, Southern State University, Magnolia

Dr. B. W. Jordan, Arkansas College, Batesville

Dr. David McAllister, Arkansas Polytechnic College, Russellville

Mr. Warren U. Ober, Southern State College, Magnolia

Mr. Leon Vawter, Arkansas Agricultural and Mechanical College, College Heights

Dr. Joe V. West, Hendrix College, Conway

INDIANA

Miss Mabel Culmer, Indiana University, Bloomington

KANSAS

Dr. Richard H. Bloomer, Wichita University, Wichita

Miss Evoly[illegible] Hinton, University of Wichita, Wichita

Miss Iva Pickering, Friends University, Wichita

LOUISIANA

Dr. W. L. Bergeron, Louisiana Polytechnic Institute, Ruston

Dr. W. J. Bordelon, Louisiana Polytechnic Institute, Ruston

Mrs. Amelia Hatcher, Louisiana State University, Baton Rouge

Miss Annie Laurie Miller, Louisiana State University, Baton Rouge

Dr. C. T. Woodard, Louisiana Polytechnic Institute, Ruston

MISSISSIPPI

Dr. Ralph C. Staiger, Mississippi Southern College, Hattiesburg

MISSOURI

Dr. Ralph W. House, State Teachers College, Kirksville

NEW MEXICO

Mrs. Gene R. Chievitz, University of New Mexico, Albuquerque

Captain George E. Mutch, New Mexico Military Institute, Roswell

OKLAHOMA

Miss Elaine Beiles, Phillips University, Enid

Miss Loris DeFigh, University of Tulsa, Tulsa
Dr. Earl C. Denney, Tulsa Public Schools, Tulsa
Dr. William Eller, University of Oklahoma, Norman
Mr. Fred E. Hagor, Connors State Agricultural College, Warner
Mr. Louie E. Harris, Oklahoma College for Women, Chickasha
Mr. E. R. Higgins, Central Christian College, Bartlesville
Mrs. E. R. Higgins, Central Christian College, Bartlesville
Dr. Ernest A. Jones, Northeastern State College, Tahlequah
Dr. Roy Sommerfeld, Oklahoma Agricultural and Mechanical College, Stillwater
Dr. C. B. Trammell, Southeastern State College, Durant
Miss Lucile Willowby, University of Oklahoma, Norman

TEXAS

Mother M. Angelica, Our Lady of the Lake College, San Antonio
Mr. J. R. Baldwin, Humble Oil and Refining Company, Baytown
Miss Constance L. Beach, Texas State College for Women, Denton
Dr. George C. Beamer, North Texas State College, Denton
Dr. Emery P. Bliesmer, University of Texas, Austin
Mrs. Dorothy Bracken, Southern Methodist University, Dallas
Dr. F. Allen Briggs, Hardin-Simmons University, Abilene
Mrs. Elsie Thames Bundy, Cleburne Public Schools, Cleburne
Mrs. Hazel Horn Carroll, Southern Methodist University, Dallas
Mr. Glenn Casey, San Angelo College, San Angelo
Oscar S. Causey, Texas Christian University, Fort Worth
Mrs. Mary C. Craig, Texas Wesleyan College, Fort Worth
Dr. Nell Dean, University of Houston, Houston

Mr. Allen E. Denton Jr., Texas Agricultural and Mechanical College, College Station
Dr. Elsie Dotson, University of Texas, Austin
Dr. Leslie P. Evans, Texas Christian University, Fort Worth
Dr. J. Ralph Ewing, O.D., Private Practice, 3719 Camp Bowie, Fort Worth
Mr. H. L. Ezell, Johnson County Schools, Cleburne
Dean C. J. Firkins, Texas Christian University, Fort Worth
Mr. C. E. George, Texas Agricultural and Mechanical College, College Station
Mr. W. E. Hercher, Baylor University, Waco
Mr. D. D. Hunt, Humble Oil and Refining Company, Houston
Miss Reba Jones, Texas Christian University, Fort Worth
Dr. A. J. Kingston, Texas Agricultural and Mechanical College, College Station
Mr. J. M. Lacy, East Texas State Teachers College, Commerce
Mr. J. W. McMillan, Humble Oil and Refining Company, Houston
Mr. Walter C. Miller, Waco
Dr. G. C. Morlan, Abilene Christian College, Abilene
Dr. Cecil J. Mullins, Lee College, Baytown
Miss Mary Nell Odle, Texas State College for Women, Denton
Dr. Otto R. Nielsen, Texas Christian University, Fort Worth
Mr. James W. Patterson, Cleburne Public Schools, Cleburne
Dr. A. J. Pollettieri, University of Houston, Houston
Dr. Thomas F. Richardson, Texas Christian University, Fort Worth
Dr. William J. Robinson, Ph.D., California Test Bureau, 5349 Ellsworth, Dallas
Mrs. Ireta R. Simons, Riverside Jr. High School, Fort Worth
Dr. Carl E. Snyder, Texas Christian University, Fort Worth
Mrs. Agnes C. Tramer, Texas State College for Women, Denton
Miss LaVert Walker, University of Houston, Houston
Miss Mary Hope Westbrook, Tarleton State College, Stephenville
Dr. Leonard R. White, O.D., Private Practice, Fort Worth

Mrs. Olive M. Whitter, Texas State College for Women, Denton
Mr. L. L. Wilkes, Hill County Schools, Hillsboro
Mrs. Myrl Worth, Southern Methodist University, Dallas